Green Bay Walleye Tagging Surveys- 2012 through 2015

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Large annual spring spawning migrations of walleye have been documented by WDNR on major Green Bay tributaries for many years. These rivers along with several other spawning locations scattered around Green Bay likely sustain the large walleye population that is found in Green Bay. Some walleye populations have been studied intensively in the past such as those found in the Fox River, while walleye that utilize the Menominee, Oconto or Peshtigo Rivers have had little evaluation.

Surveys have been conducted annually on the Fox River and lower Green Bay to assess walleye populations since the late 1980's using either fyke nets fished in spring to capture spawning age walleye or using nighttime electroshocking in the fall to target young of year (YOY) walleye. Fyke net surveys have also been conducted in spring about every five years in the Sturgeon Bay area to assess spawning walleye. In an effort to gain a more complete understanding of walleye use of the Oconto, Peshtigo and Menominee Rivers, fall nighttime electroshocking surveys have been conducted annually from 2006 through 2015 (except for 2012) to assess walleye YOY production. However, despite the large numbers of adult walleye known to utilize these rivers during spring runs, few YOY were ever captured during these surveys. Low YOY capture rates could be due to poor spawning success but also could be due to YOY walleye not being present in our index stations. YOY walleye could had either been upstream of our index stations or had already moved out into Green Bay before our surveys were conducted. In 2012, DNR began to assess the magnitude of spawning migrations into these rivers, by using daytime electroshocking just below the dams in Stiles (Oconto River) and Peshtigo (Peshtigo River) to capture walleye during the estimated peak of the spring spawning run. This work has continued through 2015 when we daytime electroshocked the Oconto, Peshtigo, Menominee and Fox Rivers during spring runs to assess walleye populations.

To capture walleye in the rivers, a standard electroshocking boat with two netters was utilized at each location. During each shocking event, captured walleye were sexed and measured. A subsample of walleye were tagged with an individually numbered Floy tag and had a dorsal spine removed for age analysis. We collected spines from up to ten fish per centimeter length interval. One fish per ten tagged was double tagged to estimate tag loss. To gain more insight on walleye movement throughout the bay, similar tags were provided to the Sturgeon Bay fisheries crew that in 2013 surveyed the local walleye population with fyke nets in the Sturgeon Bay and Little Sturgeon Bay area.

Results

2012

<u>Peshtigo River</u>

Walleye were captured below the Peshtigo Dam on March 20 and 22 (Table 1). Surface water temperature ranged from 50°F to 52°F during the survey. During this period, 499 walleye were captured that ranged in size from 386 mm to 730 mm (15.2" to 28.7") with

an average length of 546 mm (21.5”). Catch per effort (CPE) was 311.3 walleye per hour shocked on March 20. Effort was not recorded on March 22.

Most of the captured walleye (428 of 499) were male. Male walleye ranged in length from 386 mm to 652 mm (15.2” to 25.7”) and had an average length of 537 mm (21.1) (Table 2). Dorsal spine samples were collected from 108 male walleye. Ages obtained from our samples ranged from age 3 through age 8 with age 5 being the dominant male age class (Table 3). It appears male walleye begin to spawn at age 3, with most male walleye spawning by age 4. Growth, measured as length at age is above the state average at each age (Table 4).

Captured female walleye ranged in length from 502 mm to 730 mm (19.8” to 28.7”) with an average length of 593 mm (23.3”) (Table 2). Age samples were collected from 65 female walleye that had an age ranging from age 4 through age 10 (Table 5). Age 5 was the dominant female age class that we collected. Although we captured a few age 4 female walleye, it appears most females begin to spawn at age 5. Growth of female walleye was above state average growth (Table 4).

Oconto River

Walleye were shocked below the dam in Stiles on March 19 (Table 1). The water temperature at the time of the survey was 55°F. We captured 212 walleye in 1.85 hours of shocking for a CPE of 114.5 walleye per hour shocked. The captured walleye ranged in length from 388 mm to 688 mm (15.3” to 27.1”) with an average walleye length of 512 mm (20.2”).

Male walleye accounted for 114 of the 212 fish that we captured. Male walleye ranged in length from 388 mm to 592 mm (15.3” to 23.3”) and had an average length of 459 mm (18.1”) (Table 6). Dorsal spines were collected from 93 male walleye. Age 3 through age 9 walleye were in the sample with age 3 the dominant age class (Table 7). Few walleye were older than age 5 in our sample. Growth was above state averages but growth was less than observed on the Peshtigo River at each age (Table 4).

The 90 female walleye that we captured ranged in length from 496 mm to 688 mm (19.5” to 27.1”) and had an average length of 580 mm (22.8”) (Table 6). Spines were collected from 75 female walleye. Ages ranged from age 3 to age 9 with the age 5 year class dominating the sample (Table 8). Growth of female walleye in the Oconto River was above state averages (Table 4).

Eight walleye could not be sexed. They ranged in length from 367 mm to 546 mm (14.4” to 21.5”) with an average length of 472 mm (18.6”) (Table 6).

2012 Angler Returns

In 2012, we tagged 289 male walleye and 71 female walleye from the Peshtigo River, and 42 walleye were double tagged to help us estimate tag loss. During calendar year 2012, anglers returned information from 16 fish (Table 9). This information equates to a return rate of 4.4%. Tags from male or female walleye were returned in equal number despite tagging 4 times as many males as females. The single recaptured double tagged

walleye was returned with both tags present. Eight tagged fish were captured by anglers fishing in the Peshtigo River, seven from west shore locations on Green Bay and one tag was retuned by an angler fishing on the east shore of the bay (Figure 2). An average returned tag from a male was returned 55.3 days after tagging and 22.8 days after tagging for females. In the short term, March through December of 2012, it appears that walleye movement was limited to the local area.

From the Oconto River we tagged 90 female, 112 male and 7 unknown sex walleye. As of the end of 2012, we have had information returned to us from 11 fish, five males and six females (Table 9). This is a return rate of 5.3%. The return locations have been six from westshore rivers and four from the west shore of Green Bay (Figure 3). One tag return did not provide information on the location of capture. The days at large of returned tags were similar for males and females tagged from the Oconto River at 44.8 days and 42.0 respectively. Similar to walleye tagged from the Peshtigo River, walleye tagged from the Oconto River stayed along the west side of Green Bay in 2012.

2013

Peshtigo River

Walleye were shocked and tagged below the Peshtigo Dam on April 9, 16 and 17 with the majority of fish handled on April 16. Water temperatures varied between 36°F on April 9 to 41°F on April 17. During this period, we tagged 453 walleye (305 males and 148 female) in 1.93 hours of electroshocking (Table 1). Total CPE was 234.7 walleye per hour shocked.

Male walleye ranged in length from 377 mm to 681 mm (14.8" to 26.8") and had an average length of 519 mm (20.4") (Table 10). Dorsal spine samples were collected from 210 male walleye. Ages obtained from our samples ranged from age 3 through age 10 with age 6 being the dominant male age class (Table 11). It appears male walleye begin to spawn at age 3, with most male walleye spawning by age 4. Growth, measured as length at age, was lower than what was estimated in 2012, but is still above the state average at each age (Table 4).

The 148 female walleye that we captured ranged in length from 463 mm to 738 mm (18.2" to 29.1") and had an average length of 605 mm (23.8") (Table 10). Spines were collected from 139 female walleye. Ages ranged from age 3 to age 11 with the age 6 year class dominating the sample (Table 12). Growth of female walleye in the Peshtigo River was similar to what was observed in 2012 and grow in both years was above the state average (Table 4).

Oconto River

Walleye were sampled below the Stiles Dam on the Oconto River on April 22 and 23. The water temperature each day was 39°F. Over the course of the two sampling days, 532 walleye (401 male and 131 female) were tagged (Table 1). Effort was not recorded.

The 401 male walleye we captured ranged in length from 356 mm to 655 mm (14" to 25.8") and had an average length of 478 mm (18.8") (Table 13). Spines were collected

from 100 male walleye. Age 3 through age 10 and age 12 fish were noted in the sampled male fish (Table 14). Age 4 and age 6 were the most common aged male walleye in our sample. Age 10 (2003 year class) male walleye were also notably present in our sample. In 2013, length at age was less than what was measured in 2012, but male walleye captured in each year displayed above state average length at each age (Table 4).

131 female walleye were captured during electroshocking. These walleye ranged in length from 478 mm to 688 mm (18.8" to 27.1") and had an average length of 579 mm (22.8") (Table 1). We took a spine from 82 female walleye yielding ages 4 through 10 from the sample (Table 15). Age 6 was the most commonly aged female walleye but ages 4, 5 and 7 were also common. Similar to males, age 10 female walleye were also notable in the age sample.

Menominee River

Fisheries staff electroshocked for walleye below the Hattie Street dam on the Menominee River on April 8, 15 and 23 with a total effort of 4.1 hours. A total of 455 walleye (204 male and 250 female) were captured with a CPE of 111.0 walleye per hour shocked (Table 1). Water temperature throughout the period ranged from 36°F to 41°F.

A total of 205 male walleye were captured during electroshocking. These walleye ranged in length from 395 mm to 665 mm (15.6" to 26.2) and had an average length of 507 mm (20") (Table 16). Spines were collected and aged from 161 male walleye. Age 3 through age 15+ were in our sample (Table 17). Age 3 through age 7 occurred in similar number with older age fish much less abundant. Although not as strongly pronounced as in the Oconto River sample, age 10 male walleye were also notable in this sample. Length at age for male walleye collected from the Menominee River was above state averages at each age (Table 4).

We captured 250 female walleye from the Menominee River during electroshocking (Table 1). Female walleye ranged in length from 441 mm to 742 mm (17.4" to 29.2") and had an average length of 606 mm (23.9") (Table 16). Spines were collected and aged from 185 female walleye. The female walleye ranged in age from age 4 through age 15+ (Table 18). Age 6 females were the most common, but age 4 to age 5 and age 7 through age 10 female walleye were also commonly captured. Growth was above state average length at all age values (Table 4).

Fox River

The Fox River below the DePere Dam was electroshocked to capture walleye on April 3 and 4. A total of 484 walleye (422 male and 62 female) were captured during sampling (Table 1). Water temperature on both days was 38°F. Effort was not recorded.

We captured 422 male walleye that ranged in length from 385 mm to 644 mm (15.2" to 25.4") and had an average length of 422 mm (16.6") (Table 19). A spine was collected for aging from 199 male walleye. Age ranged from age 3 through age 11 (Table 20). Age 5 was the most common aged male walleye, but age 4 fish were also very common. Similar to other rivers, age 10 males were notable in their abundance in our aged sample of walleye. Length at age was above state averages at all ages (Table 4).

A total of 62 female walleye were captured during shocking. Female walleye ranged in length from 428 mm to 746 mm (16.9" to 29.4") and had an average length of 613 mm (24.1") (Table 19). Age was determined for 59 female walleye. Ages ranged from age 4 through age 12 with age 10 and age 5 the most commonly aged female walleye in our sample (Table 21). Similar to male walleye, length at age for female walleye was above state averages (Table 4).

2013 Angler Returns

Walleye were tagged in the four river locations that were electroshocked and also in the Sturgeon Bay area during a spring walleye fyke net survey in 2013. Over course of 2013, we received tag return information for 68 walleye that were tagged in 2013 as well as 6 walleye tagged in 2012 (Table 9).

In 2013, we tagged 453 walleye from the Peshtigo River (Table 9). We received tag information back from 15 walleye (12 male and 3 female) for a return rate of 3.3%. Most of the returns came from anglers fishing the Peshtigo River or from along the west shore of Green Bay north of the Pensaukee River (Figure 4). One fish was captured from the east shore near Bayshore County Park and the capture locations of six fish were unknown. The average male from which a tag was returned from was at large for 57 days (Table 9). The average female was at large for 66 days. We also received tag return information from 4 walleye that were tagged in 2012 from the Peshtigo River (Figure 2). Two of the returns were from the Peshtigo River and anglers did not provide capture information on the other two. One double tagged walleye was returned by an angler with only one tag in it. This was the only double tagged fish for walleye tagged in 2013 that was missing one of its tags at the time of angler recapture.

During electroshocking on the Oconto River, we tagged 432 (401 male and 131 female) walleye (Table 9). We received recapture information from 20 walleye (11 male and 9 female) for a return rate of 4.6%. Recapture information indicated that for males the tags were at large for an average of 55.3 days and 45.8 days for female walleye. Anglers returned tags from around the southern bay with the most returns from the Oconto River and off of the Pensaukee River (Figure 5). We also received recapture information from two fish that were tagged from the Oconto River in 2012. These fish were recaptured from between Geano Beach and the Oconto River (Figure 3).

We tagged 454 (204 male and 250 female) walleye that were captured from the Menominee River during spring 2013 electroshocking (Table 9). From those walleye, we received recapture information from 16 (8 male and 8 female) fish which is a recapture rate of 3.5%. Return information indicates that the average time from the tagging date to angler capture date for males was 38.2 days and 53.6 days for female walleye. Most of the angler returns came from the Menominee River or just outside the river in Green Bay (Figure 6). Six walleye were also captured from along the west and east shores of Green Bay.

A total of 484 (422 male and 62 female) walleye were tagged below the DePere Dam on the Fox River (Table 9). Anglers returned tags from seven (5 male and 2 female) of these marked fish during 2013 for a return rate of 1.5%. The average time between tagging and angler capture was 82.4 days and 45.0 days for male and female walleye respectively. Four of the angler returns were from the southern bay with one tag retuned from Sturgeon Bay and two that did not specify capture location (Table 7).

We tagged 638 (354 male and 284 female) walleye from the Sturgeon Bay area using fyke nets during the spring of 2013. (Table 9). In 2013, we received angler recapture on 10 fish (4 male and 6 female) for a return rate of 1.6%. The average time between tagging and angler recapture was 49.3 days for male walleye and 18.8 days for female walleye. Walleye that were tagged in the Sturgeon Bay area did not appear to move around much with all the tag returns from the east shore of Green Bay between Chaudoirs Dock and the City of Sturgeon Bay (Figure 8). One walleye return did not specify the recapture location.

2014

Peshtigo River

Walleye were captured and tagged below the Peshtigo Dam on April 17 and 21with the majority of fish captured on April 21. Water temperature was 36°F during both days of shocking. During this period, we tagged 428 walleye that included 295 males and 133 females (Table 1). Effort was not recorded.

Male walleye ranged in length from 401 mm to 679 mm (15.8' to 26.7") and had an average length of 527 mm (20.7") (Table 22). Dorsal spine samples were collected from 120 male walleye. Ages obtained from this sample ranged from age 3 through age 11 with age 7 being the dominant male age class (Table 23). It appears male walleye begin to spawn at age 3, with most males spawning by age 4. Growth, measured as length at age was lower than what was estimated in 2012, but is still above the state average at each age (Table 4).

The 133 female walleye that we captured ranged in length from 461 mm to 756 mm (18.1" to 29.8") and had an average length of 592 mm (23.3") (Table 22). Spines were collected from 106 female walleye. Ages ranged from age 3 to age 12 with the age 4 year class the most common in the sample (Table 24). Growth of female walleye in the Peshtigo River in 2014 was similar to what was observed in 2012 and 2013 and was above the state average for each of these three years (Table 4).

Oconto River

Walleye were sampled below the Stiles Dam on the Oconto River on April 10 and 16. The water temperature was 32°F on April 10 and 34°F on April 16. During electroshocking, we captured 449 walleye (272 male and 177 female) (Table 1). Effort was not recorded.

The 272 male walleye that we captured ranged in length from 400 mm to 663 mm (16" to 26.1") and had an average length of 477 mm (18.8") (Table 25). Spines were collected from 93 male walleye for age analysis. Age 2 through age 10 fish were noted in the sampled fish (Table 26). Age 4 were the most common aged walleye in our sample. In 2014, length at age was less than what was measured in 2012 but similar to lengths at age in 2013. However, length at age in all 3 years was above the state average for each age (Table 4).

177 female walleye were captured during the two days of electroshocking (Table 1). These walleye ranged in length from 454 mm to 663 mm (17.9" to 26.1') and had an average length of 551 mm (21.7") (Table 25). We removed a spine from 96 female walleye yielding ages 3 through 11 in the collected sample (Table 27). Age 4 was the most commonly aged female walleye but ages 5 and 7 were also common. Length at age in 2014 was similar to the previous years and was above state average length at age (Table 4).

Menominee River

Fisheries staff surveyed walleye below the Hattie Street dam on the Menominee River on April 23 and 24. A total of 495 walleye (258 male, 256 female and 1 unknown sex) were captured during shocking (Table 1). Water temperature throughout the period ranged from 40°F to 42°F. Effort was not recorded.

A total of 258 male walleye were captured during electroshocking. These walleye ranged in length from 404 mm to 661 mm (16" to 26") and had an average length of 507 mm (20") (Table 28). Spines were collected and aged from 107 male walleye. Age 3 through age 15 male walleye were in our sample (Table 29). Age 7 and age 4 male walleye were the most common ages in our sample with older age fish much less abundant. Age 11 (Year Class 2003) male walleye were notable in this sample. Length at age for male walleye collected from the Menominee River was above state averages at each age (Table 4).

Electroshocking captured 256 female walleye from the Menominee River during the sampling events (Table 1). Female walleye ranged in length from 443 mm to 775 mm (17.4" to 30.5") and had an average length of 589 mm (23.1") (Table 28). The 107 spines that were collected for age analysis ranged in age from age 4 through age 15 (Table 30). Age 7 females were the most common, but age 4 female walleye were also commonly captured. Growth of female walleye was above state average for all ages (Table 4).

Fox River

The Fox River below the DePere Dam was electroshocked to capture walleye on April 8 and 9. A total of 516 walleye (201 male and 315 female) were captured during sampling (Table 1). Water temperature on both days was 42°F. Effort was not recorded.

The 201 male walleye that were captured ranged in length from 366 mm to 610 mm (14.4" to 24") and had an average length of 480 mm (18.9") (Table 31). A spine was collected for aging from 95 male walleye. Age ranged from age 2 through age 11 (Table 32). Age 4 was the most common aged male walleye, but age 5 fish were also very common. Length at age for male walleye was above state averages at all ages (Table 4).

A total of 315 female walleye were captured during shocking. Female walleye ranged in length from 450 mm to 735 mm (17.7" to 28.9") and had an average length of 591 mm (23.3") (Table 31). Age was determined for 180 female walleye. Ages ranged from age 3 through age 12 with age 6 and age 5 the most commonly aged female walleye in our sample (Table 33). Similar to male walleye, length at age for female walleye was above state averages (Table 4).

2014 Angler Returns

Walleye have been tagged in the four river locations as well as in the Sturgeon Bay area since 2012. During calendar year 2014, we received angler tag return information for 90 walleye that were tagged during this project (Table 9). This included return information on two walleye tagged in 2012, 35 walleye tagged in 2013 and 53 walleye tagged in 2014 (Table 9).

2012 Tagged Walleye

During 2012, we tagged walleye on the Oconto and Peshtigo Rivers. In 2014, we received two tags from anglers from these tagging events (Table 9). One female walleye tagged in the Oconto River was recaptured by anglers fishing off of Geano Beach which is along the westshore of Green Bay south of the Oconto River (Figure 3). This fish had been at-large 800 days since being tagged. The other 2012 tagged walleye was a male that was tagged in the Peshtigo River. This fish was at-large 767 days before being captured in the Peshtigo River (Figure 2).

2013 Tagged Walleye

During 2013, walleye were tagged in all four study rivers as well as in the Sturgeon Bay area. Eight walleye tagged in 2013 from the Peshtigo River had tag recoveries in 2014 (Table 9). This data included three males and five females that had average at-large times of 353 days and 372 days respectively. Four angler recoveries were from the Peshtigo River and four tags were returned from the Oconto River (Figure 4). Seven 2013 tagged walleye from the Oconto River were recovered in 2014 by anglers (Table 9). The five males averaged 373 days at-large while the two female walleye were at large 372 days. Anglers returned six tags from walleye caught in the Oconto River and one tag from a walleye captured off the mouth of the Suamico River (Figure 5). Anglers returned nine tags from walleye marked in the Menominee River in 2013 (Table 9). Seven were male and two were female walleye. The male walleye averaged 382 days at-large and the females averaged 376 days at-large. Eight of nine returns were from walleye caught in the Menominee River, with the remaining fish captured in an unknown location (Figure 6). Anglers returned tags from four male walleye that were tagged in 2013 from the Fox River (Table 9). Tags from these walleye were returned an average of 365 days from the date of tagging. Two of the returns were from the Fox River and one return each from the Menominee River and off of Red River (Figure 7). Seven tags from walleye tagged in 2013 from the Sturgeon Bay were returned in 2014 (Table 9). This data included four males and three females that had been at-large 350 days and 362 days respectively. These fish were caught by anglers around the bay with four tags returned from Sturgeon Bay, one tag from the Chaudoirs Dock area, one from the Fox River and one from the Menominee River (Figure 8).

2014 Tagged Walleye

During electroshocking, we tagged 428 walleye from the Peshtigo River in 2014 (Table 9). We received tag information back from 15 walleye (8 male and 7 female) for a return rate of 3.5%. Most of the returns came from anglers fishing the Peshtigo River or from other west shore rivers or off their mouths (Figure 9). One fish was captured from the east shore near Chaudoirs Dock. The average male from which a tag was returned from was at-large for eight days (Table 9). The average female was at-large for 19 days.

We tagged 449 (272 male and 237 female) walleye from the Oconto River in 2014 (Table 9). We received recapture information from 18 walleye (6 male and 12 female) for a return rate of 4.0%. Recapture information indicated that tagged males were at-large for an average of 15 days and 19 days for female walleye. Most of the angler returns were from the Oconto River but several walleye were caught in the Pensaukee River and one each from the Menominee River and off of Chaudoirs Dock (Figure 10).

During 2014 electroshocking on the Menominee River, we tagged 495 (258 male and 237 female) walleye (Table 9). From those walleye, we received recapture information from 15 (4 male and 11 female) fish which is a recapture rate of 3.0%. Return information indicates that the average at-large time from tagging date to angler capture for males was 14 days and 11 days for female walleye. Eleven of the angler returns came from the Menominee River, one was from the Oconto River and 2 were from unknown locations (Figure 11).

A total of 516 (201 male and 315 female) walleye were tagged below the DePere Dam on the Fox River in 2014 (Table 9). Anglers returned tags from five (1 male and 4 female) of these marked fish during calendar year 2014 for a return rate of 1.0%. The average time between tagging and angler capture was 44 days and 34 days for male and female walleye respectively. Most of the angler returns were from the east shore of the southern bay with one tag retuned from off the Suamico River mouth (Table 12).

2015

Peshtigo River

Walleye were captured and tagged below the Peshtigo Dam on April 2, 3 and 7with the majority of fish handled on April 7. Water temperature was steady at 43°F during shocking. During this period, we tagged 463 walleye that included 310 males and 154 females (Table 1). Effort was not recorded.

Male walleye ranged in length from 373 mm to 736 mm (14.7" to 29") and had an average length of 515 mm (20.3") (Table 34). Dorsal spine samples were collected from 103 male walleye for aging. Ages obtained from our sample ranged from age 3 through age 12 with age 6 and age 5 being the dominant male ages (Table 35). It appears male walleye begin to spawn at age 3, with most males spawning by age 4. Length at age in 2015 was similar to 2014, but lower than what was estimated in 2012, but still was above the state average at each age in 2015 (Table 4).

The 154 female walleye that we captured ranged in length from 473 mm to 705 mm (18.7" to 27.8") and had an average length of 595 mm (23.4") (Table 34). Spines for aging were collected from 102 female walleye. Ages ranged from age 4 to age 13 with the age 5 year class the most common in the sample (Table 36). The length of female walleye at all ages in the Peshtigo River was similar to what was observed in previous years and was above the state average all the years of this survey (Table 4).

Oconto River

Walleye were sampled below the Stiles Dam on the Oconto River on April 9, 10, 13 and 14. Low flow and low water made shocking difficult in 2015. The water temperature ranged from 40°F on April 9 to 48.5°F on April 14. During electroshocking we captured 270 walleye (210 male and 60 female) (Table 1). Total effort was 302 minutes of shocking time. CPE for Walleye in the Oconto River was 52.9 fish per hour shocked.

The 210 male walleye that we captured ranged in length from 392 mm to 673 mm (15.4" to 26.5") and had an average length of 497 mm (19.6") (Table 37). Spines were collected from 96 male walleye for aging. Age 3 through age 12 fish were noted in the sampled fish (Table 38). Age 5 was the most common aged male walleye in our sample. In 2015, length at age through age 7 walleye length at age was similar to previous surveys, but in older fish growth appeared to have slowed but may also due to small sample sizes. Growth (length) in all survey years has been greater than state average length at each age (Table 4).

Sixty female walleye were captured during the four days of electroshocking (Table 1). These walleye ranged in length from 477 mm to 752 mm (18.8" to 29.6") and had an average length of 565 mm (22.2") (Table 27). We removed a spine for aging from 57 female walleye that yielded ages 3 through 10 in the collected sample (Table 39). Age 5 was the most commonly aged female walleye but age 6 female walleye were also common. Length at age in 2015 was similar to the previous years and was above state average length at age data (Table 4).

Menominee River

Fisheries staff collected walleye below the Hattie Street Dam on the Menominee River on April 1 and 16. A total of 433 walleye (338 male, 95 female) were captured during shocking (Table 1). Water temperature throughout the period ranged from 37°F to 45°F. Total shocking time was 187 minutes of effort yielding a CPE of 139.7 Walleye per hour shocked.

A total of 338 male walleye were captured during electroshocking. These walleye ranged in length from 341 mm to 706 mm (13.4"to 27.8") and had an average length of 521 mm (20.5") (Table 40). Spines were collected and aged from 129 male walleye. Age 2 through age 12 walleye were in our sample (Table 41). Age 5 male walleye were the most common age in our sample with ages 6, 7 and 8 also well represented. Length at age for male walleye collected from the Menominee River was above state averages at each age (Table 4).

Electroshocking captured 95 female walleye from the Menominee River during the sampling events (Table 1). Female walleye ranged in length from 479 mm to 730 mm (18.9" to 28.7") and had an average length of 577 mm (22.7") (Table 40). The 89 spines that were collected for age analysis ranged in age from age 4 through age 13 (Table 42). Age 5 females were the most common, but age 6 and age 8 female walleye were also commonly captured. Growth was above state average length at age values (Table 4).

Fox River

The Fox River below the DePere Dam was electroshocked to capture walleye on March 31, April 1 and 2. A total of 558 walleye (179 male and 379 female) were captured during sampling (Table 1). Water temperature ranged from 40°F on March 31 to 44°F on April 2. Total effort included 315 minutes of shocking over the course of the three days that were sampled. Total CPE was 105.3 Walleye per hour shocked

The 179 male walleye that were handled ranged in length from 410 mm to 612 mm 16.1" to 24.1") and had an average length of 477 mm (18.8") (Table 43). A spine was collected for aging from 87 male walleye. Ages from the collected sample ranged from age 3 through age 10 (Table 44). Age 6 was the most common aged male walleye, but age 5 and age 7 fish were also very common. Length at age was above state averages at all ages (Table 4).

A total of 379 female walleye were captured during shocking. Female walleye ranged in length from 475 mm to 760 mm (18.7" to 29.9") and had an average length of 589 mm (23.2") (Table 43). Age was determined for 113 female walleye. Ages ranged from age 4 through age 12 and age 16 in our sample (Table 45). For analysis, walleye aged 12 and older, were combined. Age 7 was the most common age walleye from our sample. Age 5 and age 6 female walleye were also commonly encountered in our sample. Similar to male walleye, length at age for female walleye was above state averages (Table 4).

2015 Returns

Angler Returns

Walleye have been tagged in the four river locations as well as in the Sturgeon Bay area since 2012. During calendar year 2015, we received angler tag return information for 336 walleye that were tagged during this project (Table 9). This included return information on six walleye tagged in 2012, 114 walleye tagged in 2013, 84 walleye tagged in 2014 and 134 walleye tagged in 2015 (Table 9). 2015 was our highest return year of the project with over three times as many tags retuned than in our previous high year (90 tags in 2014).

2012 Tagged Walleye

During 2012, we tagged walleye on the Oconto and Peshtigo Rivers. In 2015, we received six tags from anglers from these tagging events (Table 9). Tags from two male walleye that were tagged in the Peshtigo River in 2012 were retuned in 2015. One walleye was caught near Dykesville and the other was from an unknown location on the bay (Figure 2). These fish were at-large after tagging for an average of 1258 days before being captured (Table 9).

Two male and two female walleye tagged in the Oconto River in 2012 were recaptured by anglers. Two tags were returned by anglers fishing in the Oconto River, one was captured from bay off of the Pensaukee River and one was captured from an unknown location on the bay (Figure 3). The male walleyes were at large an average of 1097 days following tagging (Table 9). The female walleye averaged being at-large 1173 days post tagging.

2013 Tagged Walleye

During 2013, walleye were tagged in all four study rivers as well as in the Sturgeon Bay area. In 2015, 114 tags from 2013 were retuned by anglers (Table 9). Ten walleye tagged in 2013 from the Peshtigo River had tag recoveries in 2015. This data included eight males and two females that had average at-large times of 796 days and 840 days respectively. Three angler recoveries were from the bay off the Oconto River, two were from off Geano Beach and single recoveries were from Dykesville, off the Menominee, Pensaukee and Peshtigo Rivers and one from an unknown location (Figure 4).

Seven 2013 tagged walleye from the Oconto River were recovered in 2015 by anglers (Table 9). The four males averaged 812 days at-large while the three female walleye were at-large 797 days. Anglers returned three tags from walleye caught off the Oconto River, 2 tags from walleye caught off of Geano Beach and one each from the Oconto and Pensaukee Rivers (Figure 5)

Anglers returned fifteen tags from walleye marked in the Menominee River in 2013 (Table 9). Two were from male walleye and thirteen were from female walleye. The male walleye averaged 855 days at-large and the females averaged 770 days at-large. Seven returns were from walleye caught in the Menominee River, two returns each from Geano Beach and an unknown location and single returns from Chaudiors Dock, off of the Suamico, Pensaukee and Little Rivers (Table 6).

Anglers returned three tags (two male, 1 female) from walleye that were tagged in 2013 from the Fox River (Table 9). Tags from these walleye were returned an average of 784 days and 836 days from the date of tagging from male and female walleye respectively. All of the returns were from Green Bay, 1 each from Geano Beach, off the Pensaukee River and one unknown bay location (Figure 7).

Eighteen tags from walleye tagged in 2013 from the Sturgeon Bay were returned in 2015 (Table 9). This data included five males and thirteen female walleye that had been at-large 856 days and 773 days respectively. Seven of the tag returns were from anglers fishing in Sturgeon Bay, two each from Sand Bay, Monument Shoal, Snake Island and the Stone Quarry (Figure 8). Single returns were obtained from anglers fishing in Rileys Bay, off of Sherwood Point and an unknown bay location.

2014 Tagged Walleye

During 2014, walleye were tagged in all four study rivers. In 2015, 84 tags from 2014 were retuned by anglers (Table 9). Anglers returned 27 tags from 15 male and 12 female walleye that averaged 371 days and 420 days at-large respectively from walleye tagged in the Peshtigo River in 2014. Most of the returns (11) came from anglers fishing the Peshtigo River, six from anglers fishing in the bay off the Oconto River and two each from anglers fishing in the Oconto River, Menominee River and at unknown locations in Green Bay (Figure 9). Single tag recoveries from anglers fishing off of Geano Beach, Monument Shoal, and Suamico River and from Sturgeon Bay were returned in 2015.

We received recapture information from 23 walleye (12 male and 11 female) tagged in 2014 from the Oconto River in 2015 (Table 9). Recapture information indicated that tagged males were at-large for an average of 371 days and female walleye were at-large for an average of 420 days before being caught. Tag returns were scattered throughout

the area with five returns from Bayshore Park, four returns from off of the Pensaukee River, four returns from off the Oconto River, three from the Oconto River, 2 from the Suamico River and single returns from Geano Beach, Fox River, Sand Bay, Ellison Bay and an unknown bay location (Figure 10).

During 2015, anglers returned tags from 21 (9 male and 12 female) walleye tagged in the Menominee River in 2014 (Table 9). Return information indicates that the average at-large time from tagging date to angler capture for males was 391 days and 371 days for female walleye. Most of the returns, 10, were from anglers fishing in the Menominee River (Figure 11). Other returns, four from off the Oconto River, and one each from Chaudiors Dock, Suamico River, Monument Shoal, Henderson's Point, Dykesville, Chambers Island and an unknown location were scattered throughout Green Bay.

In 2015, anglers returned tags from thirteen (3 male and 10 female) walleye tagged from the Fox River in 2014 (Table 9). The average time between tagging and angler capture was 479 days and 434 days for male and female walleye respectively. Returns were received from throughout Green Bay including: two each from Geano Beach, Bayshore Park, and the Menominee River and one each from Little Sturgeon Bay, Sturgeon Bay, University Bay and off the Oconto, Little Suamico, Pensaukee Rivers and an unknown location (Figure 12).

2015 Tagged Walleye

During electroshocking, we tagged 464 walleye from the Peshtigo River in 2015 (Table 9). We received tag information back from 47 walleye (27 male and 20 female) for a first year return rate of 10.1%. Most of the returns came from anglers fishing the Peshtigo River (13) or from the bay off the Oconto River (10) (Figure 13). Other returns were from anglers fishing Green Bay from University Bay north to Chambers Island. The average male from which a tag was returned from was at-large for 85 days (Table 9). The average female was at-large for 59 days.

We tagged 270 (210 male and 60 female) walleye from the Oconto River in 2015 (Table 9). We received recapture information from 23 walleye (14 male and 9 female) for a first year return rate of 8.5%. Recapture information indicated that tagged males were at-large for an average of 14 days and 9 days for female walleye. Most of the angler returns were from the Oconto River, or from Green Bay off the Oconto River (Figure 14). Other recapture locations included: off the Pensaukee River, Geano Beach, Bayshore Park, Dykesville, University Bay and one unknown location.

During 2015 electroshocking on the Menominee River, we tagged 434 (339 male and 95 female) walleye (Table 9). From those walleye, we received recapture information from 23 walleye which is a first year recapture rate of 5.3%. Return information indicates that the average at-large time from tagging date to angler capture for males was 50 days and 38 days for female walleye. Thirteen of the angler returns came from the Menominee River, six were from anglers fishing the bay off the Oconto River, two from Chaudoirs Dock and one each from Dykesville and Bayshore Park (Figure 15).

A total of 578 (179 male and 379 female) walleye were tagged below the DePere Dam on the Fox River in 2015 (Table 9). Anglers returned tags from 41 (28 male and 13 female) of these marked fish during 2015 for a return rate of 7.1%. The average time between tagging and angler capture was 64 days and 80 days for male and female

walleye respectively. Seven returns were from anglers fishing in the Fox River, six each from Geano Beach and University Bay, five each from Bayshore Park, off the Suamico River and an unknown location, two each from off the Oconto River and Chaudoirs Dock and one each from Little Sturgeon Bay, Chambers Island and Dykesville (Figure 16).

DNR Survey Returns

In 2015, during spring walleye tagging surveys or during fall young of year walleye assessment surveys, we recaptured a number of walleye that were tagged as part of this project (Table 46). During 2015 shocking surveys, we recaptured seven walleye that were tagged from the Peshtigo River, five from the Oconto River, four from the Menominee River and four from the Fox River.

Of the seven fish tagged in the Peshtigo River, all were recaptured during shocking events on the Peshtigo River (Table 46). Four were tagged in 2012, two in 2013 and one from 2014.

Four of five walleye tagged in the Oconto River were recaptured in the Oconto River and the other was recovered in the Peshtigo River (Table 46). Of the fish recaptured in 2015, one was tagged in 2012 and four were tagged in 2013.

During 2015 surveys, we recaptured walleye that had been tagged from the Menominee River (Table 46). All were tagged in 2012, with three recaptures from the Menominee River and one was recaptured in the Peshtigo River.

Four walleye tagged from the Fox River during previous surveys were captured in 2015 (Table 46). All were recaptured in the Fox River and were tagged in 2014.

Discussion

Electroshocking in 2015 was difficult because of below average water levels on three of the four rivers in spring. Crews were able to reach the 500 fish tagged goal for the Fox River but not on the other three rivers. Even on the Fox River, crews were unable to tag 250 walleye of each sex. Despite difficult conditions, 1726 walleye were tagged. 1038 of the tagged fish were males and 688 were females. Over half of the tagged female walleye were tagged on the Fox River.

Results from the four years of surveys indicate that adult walleye utilize the large west shore rivers as well as the Fox River and the Sturgeon Bay area in the spring for spawning. Young of year surveys conducted in fall on the Fox River and along the far southern Green Bay shoreline has documented strong walleye recruitment many times over the past 20 years (Figure 17). The strongest year classes were produced in 2013, 2003, 1993. Year classes produced in 2007 through 2011 were also above average. It is likely that walleye runs in all the surveyed areas contribute to the overall Green Bay walleye population. However, it is not clear why when we shock the Oconto and Peshtigo Rivers in fall that we see no evidence of recruitment and only modest evidence of recruitment in the Menominee River when we have documented strong spring walleye runs in these rivers.

Comparing biological data between rivers indicates that walleye returning to these rivers are fairly similar. Average length and return size range by sex are consistent between rivers although the two more northern rivers have average sizes and maximum sizes slightly larger than the two more southern rivers in most years (Table 1). The age of return is also similar with males beginning to return at age 3 and females at age 4. Analysis of year class strength for these rivers indicate that younger fish generally dominate the spring run with age 6 (year class 2009), age 5 (YC 2010) and age 4 (YC 2011) the most common ages. When compared to long term YOY index data from the Fox River and lower Green Bay, it is not surprising that ages 4 through 8 are common because these years had good YOY production based on fall surveys (Figure 17). Angler harvest and high natural mortality may be responsible for the lack of older walleye in the population or we could be underestimating ages for older walleyes because spines have been shown to underestimate age. Otoliths could be used to age walleye to achieve better age estimates, but their use would require that these walleye would be sacrificed. The length at age for walleye in each river appeared to be consistent between rivers in 2015 and to previous surveys. As was found in past surveys, length at age at all ages for Green Bay walleye was greater than state wide averages for inland waters.

Tag return information has been gathered from anglers during the first four years of this project. In 2015, angler return of tags from marked walleye more than tripled the previous high number of tag returns. Although low tag return numbers have hampered our ability to track large scale movements around Green Bay with clarity, some general trends can be noted. Movement appears to be dependent on the river and year. In some years, it appears that most tagged fish stayed near their tagging river during the first few months, however, in other years walleye quickly move out of the area. In general, walleye tagged from westshore rivers seem to stay along the west shore, walleye tagged in the Sturgeon Bay area stayed near Sturgeon Bay and fish tagged in the Fox River stayed in the river or southern bay. The exceptions were walleye that were tagged in the Oconto River 2013, the Peshtigo River in 2014 and from all rivers in 2015 when tagged walleye moved throughout the bay. However, since tag return numbers have been low; these results should be viewed with caution. In addition, DNR survey recaptures also show that in general fish tagged in a river will be most likely be recaptured from that river in following years. Subsequent annual spring movement patterns will likely provide the greatest amount of information about site fidelity.

Many questions remain regarding the walleye population in Green Bay including those regarding stream/ river use, site fidelity, contributions to the sport fishery from unique spawning locations and the need for supplemental stocking in some locations. Further detailed survey work and cooperative studies will be necessary to answer these and other questions regarding walleye management in Wisconsin waters of Green Bay.

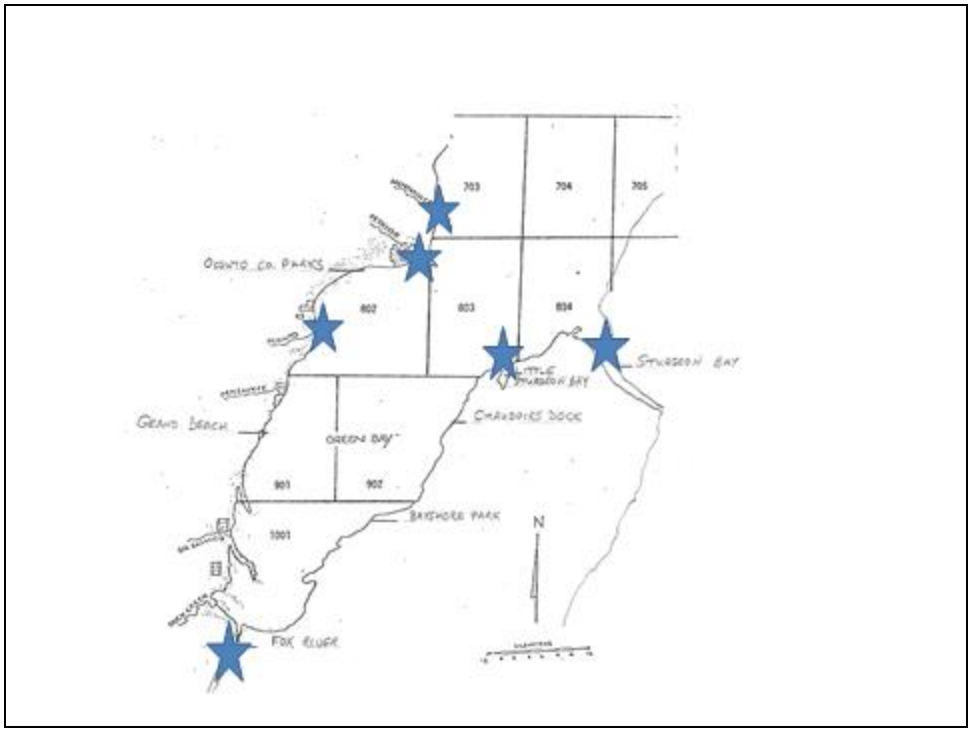

Figure 1. The tagging locations for walleye in Green Bay and the Fox River, 2012-2015. Walleye from the Oconto and Peshtigo Rivers were tagged in 2012 through 2015, while walleye from the Fox River, Menominee River were tagged in 2013- 2015 Walleye from the Sturgeon Bay area were tagged in 2013 only.

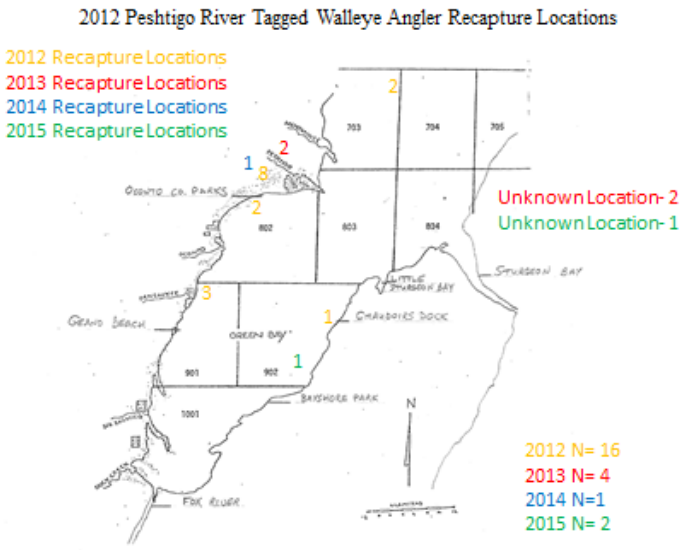

Figure 2. Angler recapture location of walleye tagged in the Peshtigo River in 2012. Returns from calendar year 2012 are in gold, returns from 2012 tagged fish from 2013 are in red, 2014 returns are in blue and 2015 returns are in green. The number indicates how many recaptures were from that location.

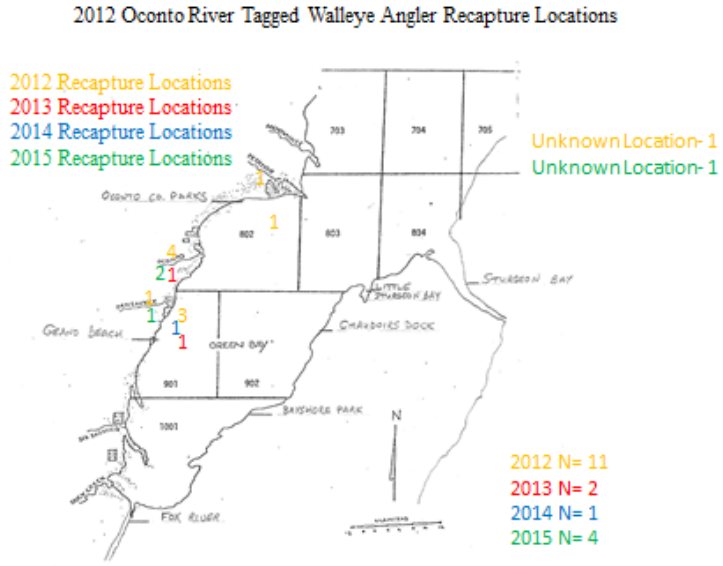

Figure 3. Angler recapture location of walleye tagged in the Oconto River in 2012. Returns from calendar year 2012 are in gold, returns from 2012 tagged fish from 2013 are in red, 2014 returns are in blue and 2015 returns are in green.The number indicates how many recaptures were from that location.

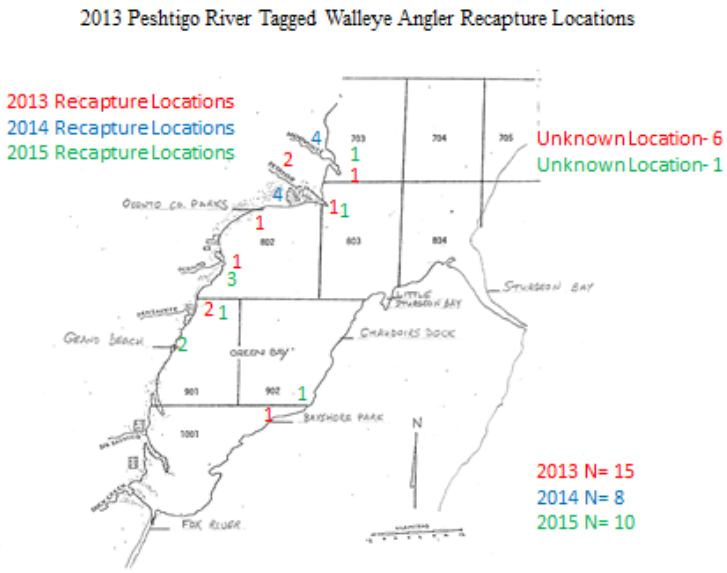

Figure 4. Angler recapture location of walleye tagged in the Peshtigo River in 2013. Returns from calendar year 2013 are in red, returns from 2014 are in blue and 2015 returns are in green. The number indicates how many recaptures were from that location.

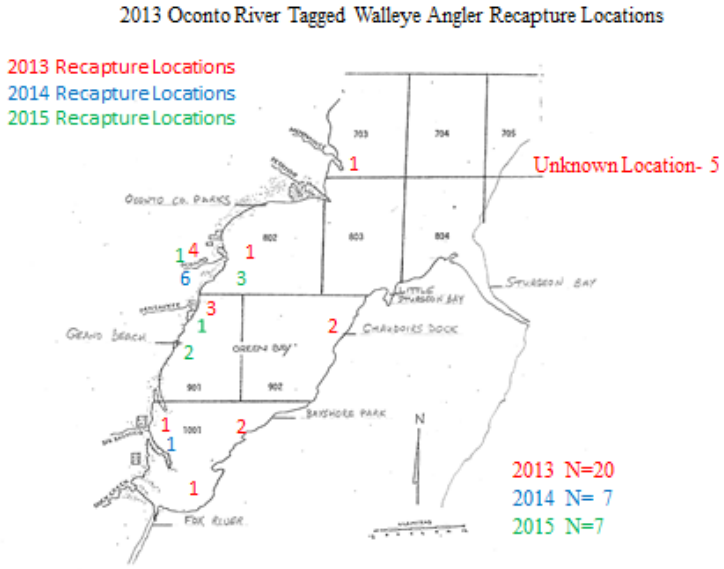

Figure 5. Angler recapture location of walleye tagged in the Oconto River in 2013. Returns from calendar year 2013 are in red, returns from 2014 are in blue and returns from 2015 are in green.The number indicates how many recaptures were from that location.

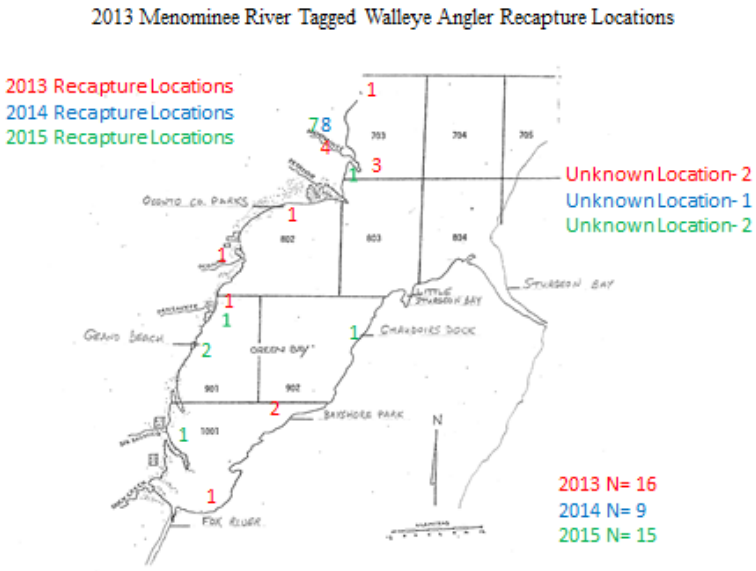

Figure 6. Angler recapture location of walleye tagged in the Menominee River in 2013. Returns from calendar year 2013 are in red, returns from 2014 are in blue and 2015 returns are in green. The number indicates how many recaptures were from that location.

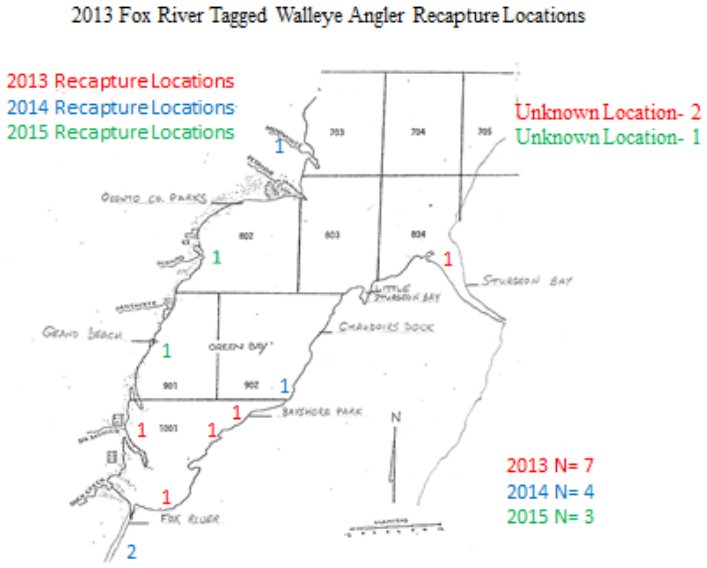

Figure 7. Angler recapture location of walleye tagged in the Fox River in 2013. Returns from calendar year 2013 are in red, returns from 2014 are in blue and 2015 returns are in green. The number indicates how many recaptures were from that location.

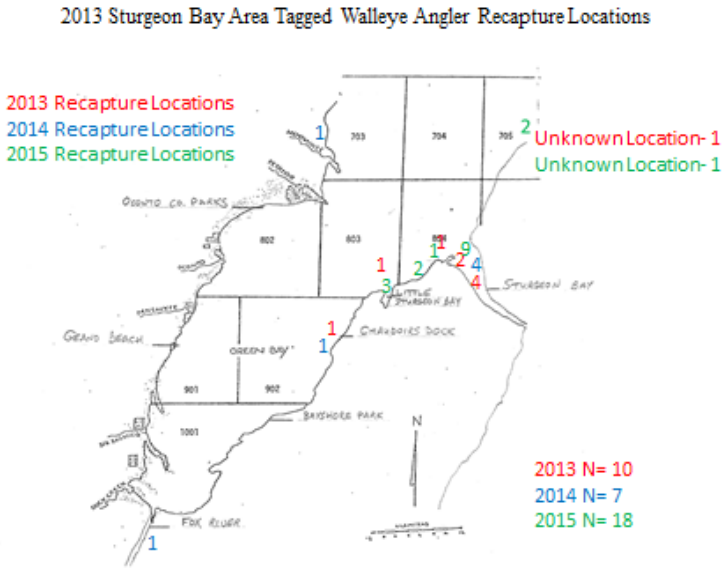

Figure 8. Angler recapture location of walleye tagged in the Sturgeon Bay area in 2013. Returns from calendar year 2013 are in red, returns from 2014 are in blue and 2105 returns are in green. The number indicates how many recaptures were from that location.

2014 Peshtigo River Tagged Walleye Recapture Locations

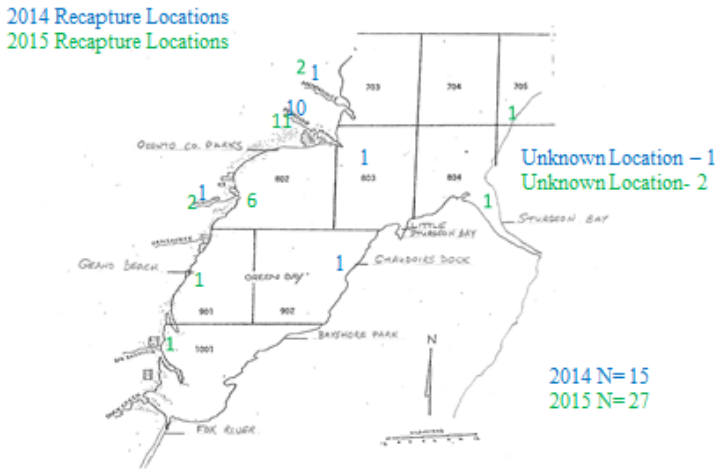

Figure 9. Angler recapture location of walleye tagged in the Peshtigo River in 2014. Returns from calendar year 2014 are in blue and returns from 2015 are in green. The number indicates how many recaptures were from that location.

2014 Oconto River Tagged Walleye Angler Recapture Locations

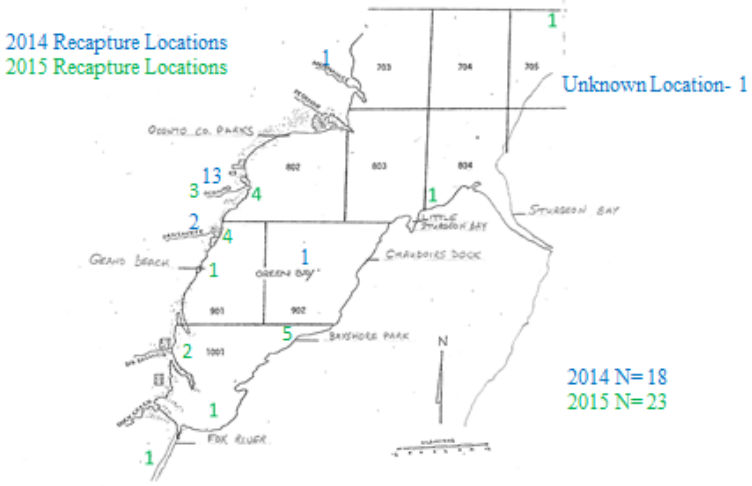

Figure 10. Angler recapture location of walleye tagged in the Oconto River in 2014. Returns from calendar year 2014 are in blue and returns from 2015 are in green. The number indicates how many recaptures were from that location.

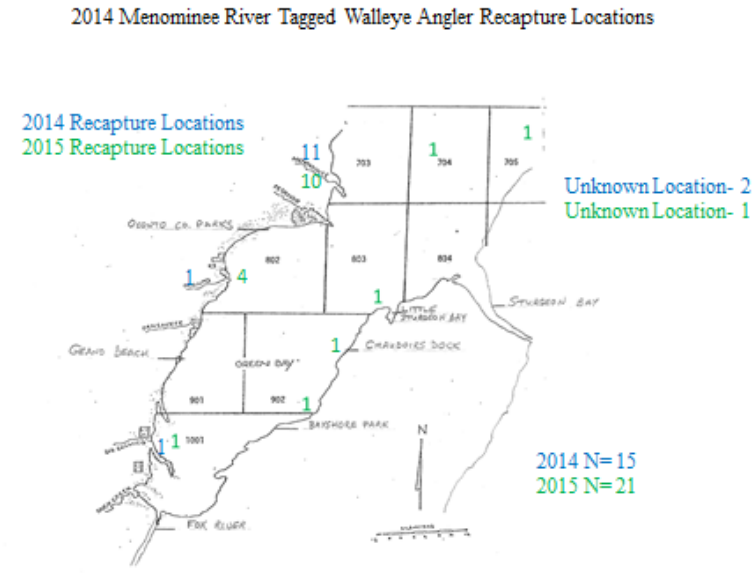

Figure 11. Angler recapture location of walleye tagged in the Menominee River in 2014. Returns from calendar year 2014 are in blue and returns from 2015 are in green. The number indicates how many recaptures were from that location.

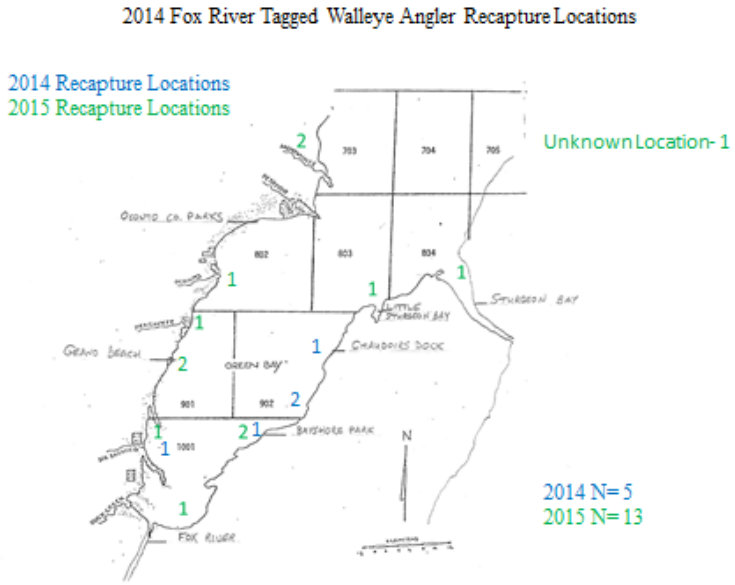

Figure 12. Angler recapture location of walleye tagged in the Fox River in 2014. Returns from calendar year 2014 are in blue and returns from 2015 are in green. The number indicates how many recaptures were from that location.

2015 Peshtigo River Tagged Walleye Angler Recapture Locations

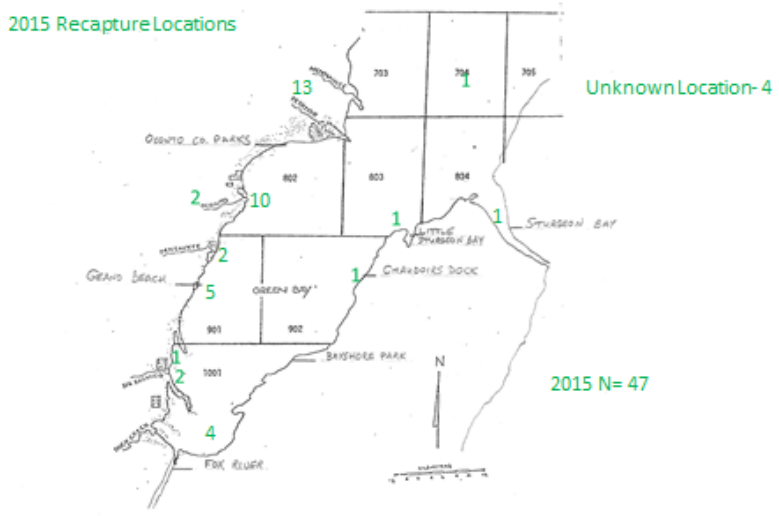

Figure 13. Angler recapture location of walleye tagged in the Peshtigo River in 2015. Returns from calendar year 2015 are in green. The number indicates how many recaptures were from that location.

2015 Oconto River Tagged Walleye Angler Recapture Locations

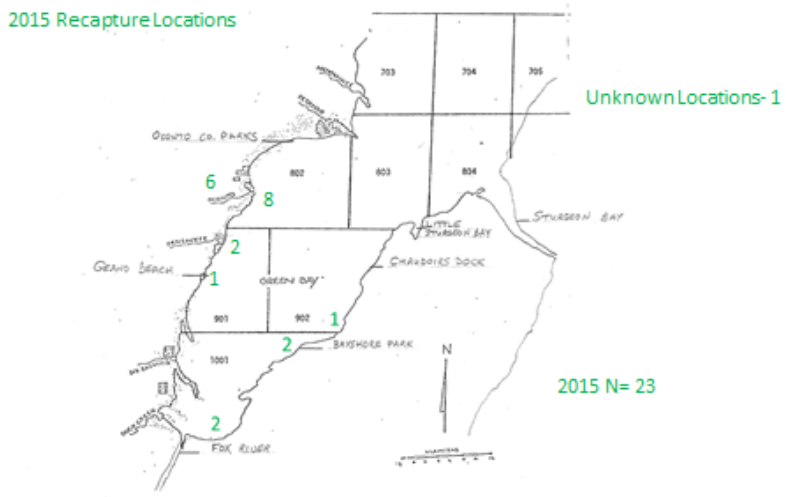

Figure 14. Angler recapture location of walleye tagged in the Oconto River in 2015. Returns from calendar year 2015 are in green. The number indicates how many recaptures were from that location.

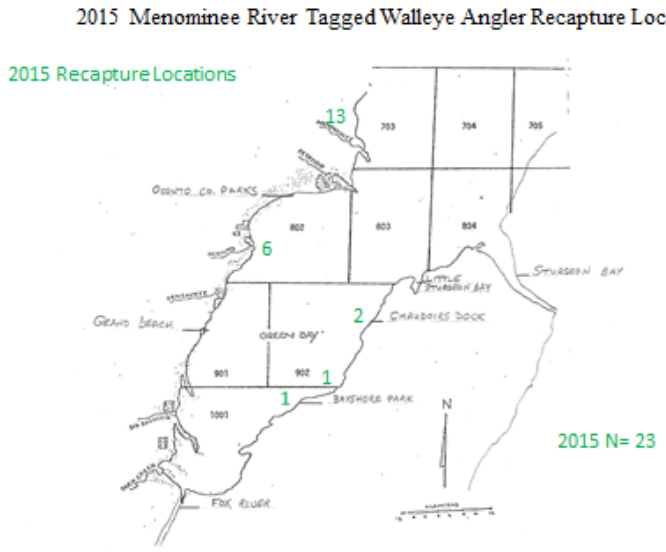

Figure 15. Angler recapture location of walleye tagged in the Menominee River in 2015. Returns from calendar year 2015 are in green. The number indicates how many recaptures were from that location.

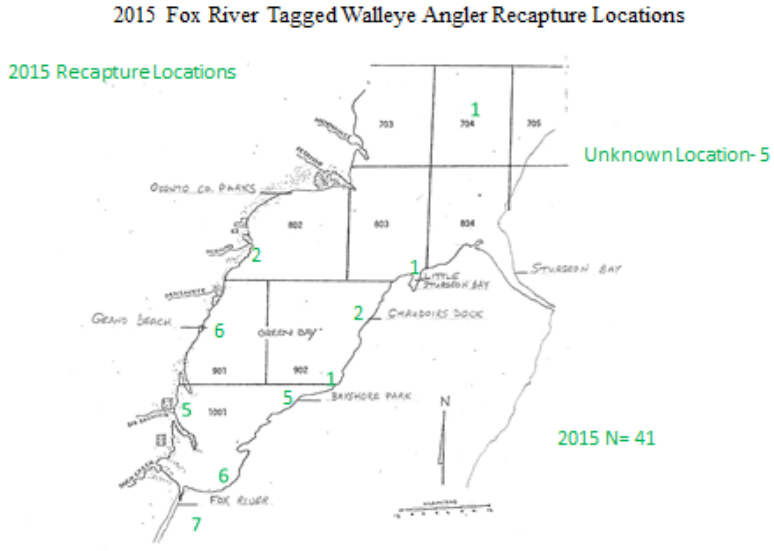

Figure 16. Angler recapture location of walleye tagged in the Fox River in 2015. Returns from calendar year 2015 are in green. The number indicates how many recaptures were from that location.

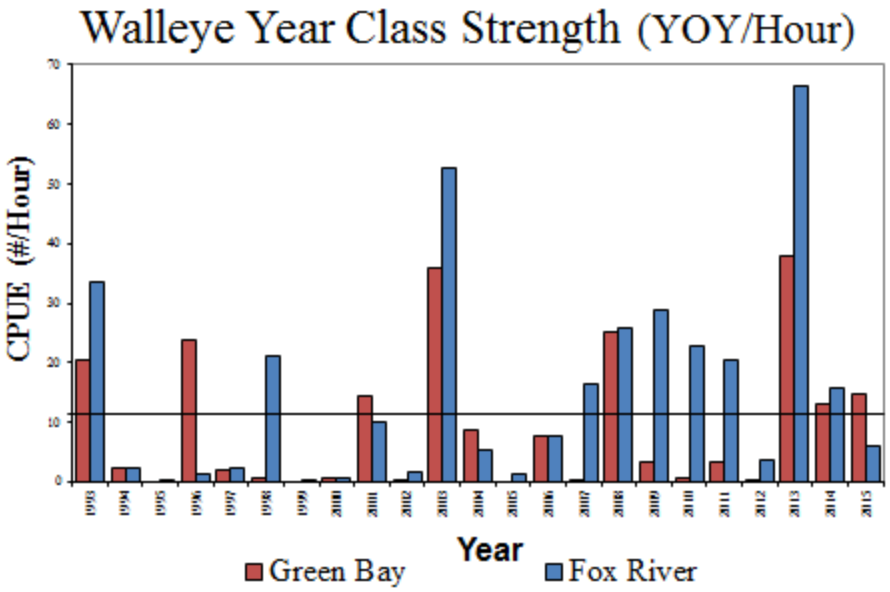

Figure 17. Walleye young of year CPUE from the Fox River and lower Green Bay from 1993 through 2015. YOY data is collected during annual fall index surveys conducted during nighttime hours. The black line indicates the average YOY CPE from 1993 through 2015.

Table 1. Spring walleye capture summary from electroshocking surveys below Peshtigo dam, Peshtigo River, Marinette County, Wisconsin, below Stiles dam, Oconto River, Oconto County Wisconsin, below Hattie Street Dam, Menominee River, Marinette County and the DePere Dam, Fox River, Brown County during 2012, 2013, 2014 and 2015.

Year		Peshtigo River			Oconto River			Menominee River			Fox River		
		Captured	Tagged	Ave. Length	Captured	Tagged	Ave. Length	Captured	Tagged	Ave. Length	Captured	Tagged	Ave. Length
2012													
	Male	428	289	537 mm (21.1")	114	112	459 mm (18.1")						
	Female	71	71	593 mm (23.3")	90	90	580 mm (22.8")						
	Unknown	0	0		8	7	472 mm (18.6")						
	Total	499	360		212	209							
2013													
	Male	305	305	519 mm (20.4")	401	401	478 mm (18.8")	205	204	507 mm (20")	422	422	472 mm (18.6"
	Female	148	148	606 mm (23.9")	131	131	579 mm (22.8")	250	250	606 mm (23.9")	62	62	613 mm (24.1")
	Unknown	0	0		0	0		0	0		0	0	
	Total	453	453		532	532		455	454		484	484	
2014													
	Male	295	295	527 mm (20.7")	272	272	477 mm (18.8")	258	258	507 mm (20")	201	201	480 mm (18.9")
	Female	133	133	592 mm (23.3")	177	177	551 mm (21.7")	236	236	589 mm (23.2")	315	315	591 mm
	Unknown	0	0		0	0		1	1		0	0	(23.3")
	Total	428	428		449	449		495	495		516	516	
2015													
	Male	310	310	515 mm (20.3")	210	201	497 mm (19.6")	339	339	521 mm (20.5")	179	179	477 mm (18.8")
	Female	154	154	595 mm (23.4")	60	60	565 mm (22.2")	95	95	577 mm (22.7")	379	379	589 mm (23.2")
	Unknown	0	0		0	0		0	0		0	0	
	Total	464	464		270	270		434	434		558	558	

Table 2. The length frequency of male and female walleye captured during electroshocking below Peshtigo dam, Peshtigo River, Marinette County, Wisconsin. March 20 and March 22, 2012.

Length (in) mm	Female	Male
380		1
90		
(16") 400		
10		4
20		2
30		2
40		6
(18") 50		5
60		6
70		13
80		14
90		24
(20") 500	2	37
10	2	49
20	2	34
30	3	36
40	4	30
(22") 50	4	33
60	5	23
70	5	28
80	3	18
90	6	23
(24") 600	9	19
10	2	8
20	2	6
30	4	4
40	2	2
(26') 50	4	1
60	1	
70	3	
80	1	
90	3	
(28") 700		
10	1	
20	2	
30	1	
Total	**71**	**428**
Ave. Length	**603 (23.7")**	**537 (21.1")**
S.D.	**56.0**	**45.3**

Table 3. The 2012 age distribution of male walleye captured from the Peshtigo River, Marinette County, Wisconsin. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length (in) mm	Age					
	3	**4**	**5**	**6**	**7**	**8**
380	1					
90						
(16") 400						
10	3	1				
20	2					
30		2				
40	4		2			
(18") 50	3	2				
60	1	3	2			
70		8	5			
80		8	3	3		
90		12	12			
(20") 500		9	28			
10		10	39			
20			27	7		
30		7	29			
40			12	12		6
(22") 50			7	13	13	
60			8	3	12	
70				5	14	9
80					11	7
90				5		18
(24") 600					6	13
10				2		6
20					1	5
30					3	1
40						2
(26") 50						1
Total	**14**	**62**	**174**	**50**	**60**	**68**
Ave. Length	**434 (17.1")**	**494 (19.4")**	**520 (20.5")**	**553 (21.8")**	**577 (22.7")**	**594 (23.4")**
S.D.	**21.2**	**25.5**	**22.2**	**28.4**	**20.9**	**23.7**

Table 4. A comparison of average length at age of walleye captured during spring electroshocking surveys on the Peshtigo, Oconto, Menominee and Fox River in 2012 through 2015 to statewide averages. All measurements are in millimeters.

		AGE												
Location	Year/Sex	0	1	2	3	4	5	6	7	8	9	10	11	12
State Average		162 (6.4")	206 (8.1")	250 (10")	356 (14.1")	371 (14.6")	420 (16.5")	460 (18.1")	494 (19.4")	524 (20.6")	553 (21.7")	551 21.7")	594 (23.4")	622 (24.5"
Peshtigo River	2012													
	Male				434	494	520	553	577	594				
	Female					525	567	595	605	631	681	655		
	2013													
	Male				430	466	494	540	544	576	605	622		
	Female				465	524	533	604	591	631	670	681	700	
	2014													
	Male				461	449	504	516	548	541	597	586	571	
	Female				460	516	545	558	623	603	632	672	691	651
	2015													
	Male				432	487	481	509	553	551	596	601	648	645
	Female					507	540	550	569	634	610	656	696	692
Oconto River	2012													
	Male				419	465	500	539	555	550				
	Female				495	515	572	573	605	619	648			
	2013													
	Male				423	458	476	517	513	500-	545	543		655
	Female					518	540	593	594	611	615	639	640	
	2014													
	Male				434	458	479	511	516	557	542	605		
	Female				505	510	539	572	608	565	605	678	659	
	2015													
	Male				437	459	484	496	535	572	560	605	--	485
	Female				535	518	528	555	600	661	638	720		
Menominee River	2013													
	Male				433	469	492	535	530	537	588	571	555	640
	Female					519	553	596	615	633	620	656	675	725
	2014													
	Male				432	457	477	521	539	528	572	576		
	Female					506	540	567	611	643	625	657	636	653
	2015													
	Male			345	428	461	486	522	545	560	574	570	644	650
	Female					513	537	548	581	624	622	655	655	680
Fox River	2013													
	Male				424	458	468	499	554	550	465	542	533	
	Female					499	594	605	621	620	651	678	670	705
	2014													
	Male			365	432	460	480	491	528	578	557	585	525	
	Female				455	518	548	558	628	625	650	669	665	672
	2015													
	Male				434	450	467	482	502	550	590	515		
	Female					502	538	563	570	637	634	652	672	706

Table 5. The 2012 age distribution of female walleye captured from the Peshtigo River, Marinette County, Wisconsin. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length (in) mm	Age						
	4	**5**	**6**	**7**	**8**	**9**	**10**
(20") 500	1	1					
10	2						
20		2					
30		2	1				
40		4					
(22") 50		3		1			
60	1	3			1		
70		5					
80		3					
90		3			2	1	
(24") 600		4	1		4		
10					2		
20				1	1		
30				1	1	2	
40			1		1		
(26") 50					3		1
60						1	
70					3		
80					1		
90						3	
(28") 700							
10						1	
20						2	
30						1	
Total	**4**	**30**	**3**	**3**	**19**	**11**	**1**
Ave. Length	**525 (20.7")**	**567 (22.3")**	**595 (23.4")**	**605 (23.8")**	**631 (24.8")**	**681 (26.8")**	**655 (25.8")**
S.D.	**27.1**	**27.1**	**55.7**	**43.6**	**34.1**	**44.6**	**--**

Table 6. The length frequency of walleye captured during electroshocking below the Stiles Dam on the Oconto River, Oconto County, Wisconsin on March 19, 2012.

Length (in) mm	Male	Female	Unknown
(14") 350	1		
360			1
370	1		
380	3		
390	1		
(16") 400	8		
410	14		
420	13		
430	9		
440	6		
(18") 450	5		1
460	7		1
470	9		1
480	5		2
490	4	1	
(20") 500	8	3	1
510	7	3	
520	4	3	
530	4	3	
540	1	5	1
(22") 550	2	8	
560		12	
570	1	8	
580		9	
590	1	7	
(24") 600		5	
610		5	
620		5	
630		2	
640		4	
(26") 650		2	
660		2	
670		2	
680		1	
690			
(28") 700			
Total	**114**	**90**	**8**
Ave. Length	**459 (18.1")**	**580 (22.8")**	**472 (18.6")**
S.D.	**47.9**	**43.2**	**50.9**

Table 7. The age distribution of male walleye captured from the Oconto River, Oconto County, Wisconsin in March 2012. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length (in) mm	Age					
	3	4	5	6	7	8
(14") 350	1					
60						
70	1					
80	3					
90	1					
(16") 400	8					
10	14					
20	11	2				
30	8	1				
40	3	3				
(18") 50		3	2			
60	2	4	1			
70	1	5	3			
80		2	3			
90			4			
(20") 500		1	6	1		
10			6		1	
20		1	2			1
30			3	1		
40				1		
(22") 50				2		
60						
70						1
80						
90					1	
(24") 600						
10						
20						
Total	**53**	**22**	**30**	**5**	**2**	**2**
Ave. Length	**419 (16.5")**	**465 (18.3")**	**500 (20")**	**539 (21.2")**	**555 (21.9)**	**550 (21.7")**
S.D.	**21.3**	**24**	**22.2**	**20.7**	**56.6**	**35.4**

Table 8. The age distribution of female walleye captured from the Oconto River, Oconto County, Wisconsin in March 2012. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length (in) mm	Age						
	3	**4**	**5**	**6**	**7**	**8**	**9**
(18") 450							
60							
70							
80							
90	1						
(20") 500		3					
10		3					
20		1	1	1			
30		1	1	1			
40			5				
(22") 50			7			1	
60			10	2			
70			3	3	2		
80			5	4			
90			3	2		2	
(24") 600			4			1	
10			2		1	1	1
20			1		1		3
30					1	1	
40						1	3
(26") 50							2
60						2	
70							2
80							1
90							
(28") 700							
Total	**1**	**8**	**42**	**13**	**5**	**9**	**12**
Ave. Length	**495 (19.5")**	**515 (20.3")**	**572 (22.5")**	**573 (22.5")**	**605 (23.8")**	**619 (24.4")**	**648 (25.5")**
S.D.	**--**	**10.7**	**23.7**	**21.3**	**28.3**	**36.4**	**22.6**

Table 9. Angler tag return locations from fish tagged from 2012-2015 on the Peshtigo, Oconto, Menominee and Fox Rivers as well as those tagged in the Sturgeon Bay area in 2013.

Tag Location	Sex	Tagged or Recaptured									
		2012	**2012 in 2013**	**2012 in 2014**	**2012 in 2015**	**2013**	**2013 in 2014**	**2013 in 2015**	**2014**	**2014 in 2015**	**2015**
Fox River											
Tagged											
	Male					422			201		179
	Female					62			315		379
Recaptured											
	Male					5	4	2	1	3	28
	Female					2	0	1	4	10	13
Days at Large											
	Male					82	365	784	44	479	64
	Female					45	0	836	34	434	80
Menominee River											
Tagged											
	Male					204			258		339
	Female					250			237		95
Recaptured											
	Male					8	7	2	4	9	17
	Female					8	2	13	11	12	6
Days at Large											
	Male					38	382	855	14	391	50
	Female					54	376	770	11	371	38
Oconto River											
Tagged											
	Male	112				401			272		210
	Female	97				131			177		60
Recaptured											
	Male	5	0	0	2	11	5	4	6	12	14
	Female	6	2	1	2	9	2	3	12	11	9
Days at Large											
	Male	45	0	0	1097	55	373	812	15	440	118
	Female	42	457	800	1173	46	372	797	19	440	18
Peshtigo River											
Tagged											
	Male	289				305			295		310
	Female	71				148			133		154
Recaptured											
	Male	9	3	1	2	12	3	8	8	15	27
	Female	8	1	0	0	3	5	2	7	12	20
Days at Large											
	Male	55	408	767	1258	57	353	796	8	371	85
	Female	22.8	Unk.	0	0		372	840	19	420	59
Sturgeon Bay											
Tagged											
	Male					354					
	Female					284					
Recaptured											
	Male					4	4	5			
	Female					6	3	13			
Days at Large											
	Male					49	350	856			
	Female					19	362	773			

Table 10. The length frequency of male and female walleye captured during electroshocking below Peshtigo dam, Peshtigo River, Marinette County, Wisconsin on April 9, 16 and 17, 2013.

Length (in) mm	Male	Female
(14”) 350		
360		
370	1	
380	1	
390	2	
(16”) 400	1	
410	8	
420	13	
430	14	
440	15	
(18”) 450	14	
460	13	2
470	17	1
480	9	
490	6	1
(20”) 500	10	8
510	17	2
520	21	9
530	26	5
540	19	9
(22”) 550	18	1
560	11	4
570	21	6
580	4	11
590	13	6
(24”) 600	8	6
610	7	13
620	3	10
630	6	13
640	2	10
(26”) 650		2
660	1	6
670	3	4
680	1	2
690		4
(28”) 700		4
710		4
720		3
730		2
740		
(30”) 750		
Total	305	148
Ave. Length	519 (20.4”)	605 (23.8”)
S.D.	63.5	63.2

Table 11. The 2013 age distribution of male walleye captured from the Peshtigo River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length	Male	Age							
(in) mm	Total	3	4	5	6	7	8	9	10
(14") 350									
360									
370	1	1							
380	1	1							
390	2	1		1					
(16") 400	1	1							
410	8	7	1						
420	13	12	1						
430	14	10	4						
440	15	9	5	1					
(18") 450	14	6	8						
460	13		8	4	1				
470	17		15		2				
480	9		5		3	1			
490	6			1	3	2			
(20") 500	10		1	4	4	1			
510	17		3	3	9	2			
520	21			2	14	5			
530	26				18	5	3		
540	19			2	11	4	2		
(22") 550	18				7	5	2	4	
560	11				5	5		1	
570	21				15	2	2	2	
580	4				2	1	1		
590	13				2		2	5	4
(24") 600	8				1	1	1	3	2
610	7					1	1	2	3
620	3						1	2	
630	6				1		1	1	3
640	2							1	1
(26") 650									
660	1							1	
670	3							1	2
680	1							1	
690									
(28") 700									
710									
720									
730									
740									
(30") 750									
Total	305	48	51	18	98	35	16	24	15
Ave. Length	519 (20.4")	430 (16.9)	466 (18.3")	494 (19.4")	540 (21.3")	544 (21.4")	576 (22.7")	605 (23.8")	622 (24.5")
S.D.	63.5	17.7	21.5	38.1	30.5	29.1	33.6	37.5	27.1

Table 12. The 2013 age distribution of female walleye captured from the Peshtigo River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length (in) mm	Female Total	Age								
		3	4	5	6	7	8	9	10	11
(14") 350										
360										
370										
380										
390										
(16") 400										
410										
420										
430										
440										
(18") 450										
460	2	1	1							
470	1					1				
480										
490	1		1							
(20") 500	8		5	3						
510	2		2							
520	9		5	4						
530	5		1	2	2					
540	9		5		4					
(22") 550	1		1							
560	4		1	1	2					
570	6			2	4					
580	11				9	2				
590	6				5		1			
(24") 600	6				3	3				
610	13				11		1	1		
620	10				7	1			2	
630	13				7		1		5	
640	10				6	1	1		2	
(26") 650	2				1			1		
660	6						1	4	1	
670	4							2	2	
680	2								2	
690	4							1	3	
(28") 700	4								3	1
710	4								4	
720	3							1	2	
730	2								2	
740										
(30") 750										
Total	148	1	22	12	61	8	5	10	28	1
Ave. Length	605 (23.8")	465 (18.3")	524 (20.6")	533 (21")	604 (23.8")	591 (23.3")	631 (24.8")	670 (26.4")	681 (26.8")	700 (28")
S.D.	63.2	0	23.2	25.5	30.9	51.1	27.1	27.9	36.7	0

Table 13. The length frequency of male and female walleye captured during electroshocking below the Stiles Dam on the Oconto River on April 22 and 23, 2013.

Length (in) mm	Male	Female
(14") 350	1	
360	1	
370	1	
380	1	
390	4	
(16") 400	13	
410	23	
420	26	
430	35	
440	30	
(18") 450	30	
460	21	
470	29	2
480	26	3
490	29	2
(20") 500	20	3
510	26	10
520	23	9
530	18	6
540	14	3
(22") 550	9	2
560	3	6
570	2	13
580	2	12
590	3	13
(24") 600	4	11
610	3	9
620	1	8
630	2	4
640		6
(26") 650	1	5
660		2
670		1
680		1
690		
(28") 700		
Total	401	131
Ave. Length	478 (18.8")	579 (22.8")
S.D.	50.8	48.7

Table 14. The 2013 age distribution of male walleye captured from the Oconto River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length	Male	Age									
(in) mm	Number	3	4	5	6	7	8	9	10	11	12
(14") 350	1	1									
360	1	1									
370	1	1									
380	1	1									
390	4	4									
(16") 400	13	10		3							
410	23	17		6							
420	26	13	13								
430	35	14	21								
440	30	5	15	5		5					
(18") 450	30	10	15				5				
460	21		17		4						
470	29		7	7	15						
480	26		16			5			5		
490	29		6	12	11						
(20") 500	20			8	8				4		
510	26		4	5	9	4			4		
520	23				17	6					
530	18				9	4			5		
540	14				11			3			
(22") 550	9				7				2		
560	3					3					
570	2				1				1		
580	2			1	1						
590	3				2				1		
(24") 600	4					2	1		1		
610	3						1		2		
620	1								1		
630	2								2		
640											
(26") 650	1										1
660											
670											
680											
690											
(28") 700											
Total	401	77	114	47	95	29	7	3	28	0	1
Ave. Length	478 (18.8")	423 (16.7")	458 (18")	476 (18.7")	517 (20.4")	513 (20.2")	500 (19.7)	545 (21.5")	543 (21.4")	--	655 (25.8)
S.D.	50.8	21.1	23.7	39.8	30.4	44.3	75.7	--	50.2	--	--

Table 15. The 2013 age distribution of female walleye captured from the Oconto River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length	Female	Age									
(in) mm	Number	3	4	5	6	7	8	9	10	11	12
(14") 350											
360											
370											
380											
390											
(16") 400											
410											
420											
430											
440											
(18") 450											
460											
470	2		2								
480	3		2		1						
490	2		2								
(20") 500	3		1	2							
510	10		6	4							
520	9		5	2	2						
530	6		2	2	1	1					
540	3		1	1			1				
(22") 550	2			2							
560	6			3		2	1				
570	13			3	5	5					
580	12				10	2					
590	13				9	2		2			
(24") 600	11				7		2		2		
610	9					5			4		
620	8				6		2				
630	4					3				1	
640	6		1		3				1	1	
(26") 650	5						1	1	3		
660	2						1		1		
670	1								1		
680	1								1		
690											
(28") 700											
Total	131	0	22	19	44	20	8	3	13	2	0
Ave. Length	579 (22.8")	--	518 (20.4")	540 (21.3")	593 (23.3")	594 (23.4")	611 (24.1)	615 (24.2")	639 (25.2")	640 (25.2")	--
S.D.	48.7	--	34.3	25.2	31.2	27.3	41	34.6	28.1	7.1	--

Table 16. The length frequency of male and female walleye captured during electroshocking below the Hattie Street Dam on the Menominee River on April 8, 15 and 23, 2013.

Length (in) mm	Males	Females
390	1	
(16") 400	3	
410	6	
420	5	
430	4	
440	17	1
(18") 450	11	
460	12	1
470	12	
480	6	1
490	11	4
(20") 500	11	5
510	18	6
520	8	4
530	20	2
540	18	10
(22") 550	11	17
560	10	8
570	4	10
580	4	19
590	3	18
(24") 600	1	23
610		24
620	3	14
630	2	18
640	1	15
(26") 650	1	9
660	1	10
670		10
680		6
690		4
(28") 700		2
710		6
720		2
730		
740		1
(30") 750		
Total	204	250
Ave. Length	507 (20")	606 (23.9")
S.D.	54.2	53.6

Table 17. The 2013 age distribution of male walleye captured from the Menominee River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length (in) mm	Male Total	Age												
		3	4	5	6	7	8	9	10	11	12	13	14	15+
390	1	1												
(16") 400	3	2		1										
410	6	5	1											
420	5	5												
430	4	4												
440	17	9	4	4										
(18") 450	11	4	7											
460	12	1	9	1	1									
470	12		3	7	2									
480	6		2	3		1								
490	11		3	2	1	5								
(20") 500	11			1	5	3	2							
510	18			2	7	5	2		2					
520	8		1		4	1	1		1					
530	20			6	8	6								
540	18			2	9	5							2	
(22") 550	11		1		4	2	3			1				
560	10				3	5	1	1						
570	4				1		1	1	1					
580	4				1	1		1	1					
590	3				2				1					
(24") 600	1				1									
610														
620	3							1	1				1	
630	2								1		1			
640	1										1			
(26") 650	1													1
660	1											1		
670														
680														
690														
(28") 700														
Total	204	31	31	29	49	34	10	4	8	1	2	1	3	1
Ave. Length	507 (20")	433 (17")	469 (18.5")	492 (19.4")	535 (21.1")	530 (20.9")	537 (21.1")	588 (23.1)	571 (22.5")	555 (21.9")	640 (25.2")	665 (26.2")	571 (22.5")	655 25.8")
S.D.	54.2	17.5	25.8	36.5	29.9	26.3	26.6	26.3	48	0	7.1	0	46.2	0

Table 18. The 2013 age distribution of female walleye captured from the Menominee River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length		Age												
(in) mm	Females	4	5	6	7	8	9	10	11	12	13	14	15+
430													
440	1	1											
(18") 450													
460	1	1											
470													
480	1	1											
490	4	3	1										
(20") 500	5	3	2										
510	6	4	2										
520	4	3	1										
530	2	1	1										
540	10	5	1	3	1								
(22") 550	17	2	6	7				2					
560	8		2	3	1	2							
570	10	1		7	1		1						
580	19		2	12		2	2	1					
590	18			12	2	2	2						
(24") 600	23		2	12	5		2	2					
610	24			12		6	6						
620	14		1	8	3	1			1				
630	18			2	2	4	4	4			2		
640	15			3	3	1	5	3					
(26") 650	9				2		1	4	2				
660	10			1		1		7	1				
670	10					2		7	1				
680	6							3	2			1	
690	4					2		2					
(28") 700	2					1				1			
710	6					1			2			1	2
720	2							2					
730													
740	1									1			
(30") 750													
Total	250	25	21	82	20	25	23	37	9	2	2	2	2
Ave. Length	606 (23.9")	519 (20.4")	553 (21.8")	596 (23.5")	615 (24.2")	633 (24.9")	620 (24.4")	656 (25.8")	675 (26.6")	725 (28.5")	635 (25")	700 (28")	715 (28.1")
S.D.	53.6	29.9	35.3	25.8	30.2	42.4	22.9	37.6	29.2	28.3	0	21.2	0

Table 19. The length frequency of male and female walleye captured during electroshocking below the DePere Dam on the Fox River on April 3 and 4, 2013.

Length (in) mm	Male	Female
(14") 350		
360		
370		
380	2	
390	4	
(16") 400	10	
410	10	
420	37	1
430	41	
440	48	
(18") 450	49	
460	36	
470	38	
480	28	1
490	18	
(20") 500	14	3
510	12	4
520	20	1
530	14	2
540	12	2
(22") 550	6	2
560	5	3
570	4	4
580	5	
590	3	2
(24") 600	1	4
610	1	1
620	1	2
630	2	2
640	1	3
(26") 650		2
660		3
670		5
680		5
690		4
(28") 700		3
710		1
720		
730		
740		1
(30") 750		
Number	422	61
Ave. Length	472 (18.6")	613 (24.1")
SD	46.4	71.4

Table 20. The 2013 age distribution of male walleye captured from the Fox River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length	Male	Age								
(in) mm	Total	3	4	5	6	7	8	9	10	11
(14") 350										
360										
370										
380	2	1	1							
390	4	2	2							
(16") 400	10	10								
410	10	6	4							
420	37	25	6	6						
430	41	18		18				5		
440	48	5	19	19					5	
(18") 450	49		22	22	5					
460	36		14	8	14					
470	38		19	10	9					
480	28		3	21	4					
490	18		6	3	6					3
(20") 500	14		2	7	3		2			
510	12		1	5	5	1				
520	20			6	6	2	2	2	2	
530	14			3	9		1			1
540	12				3	3		1	5	
(22") 550	6				1	2	2		1	
560	5			1			2		2	
570	4				2		1		1	
580	5					2	1		2	
590	3				1				2	
(24") 600	1						1			
610	1					1				
620	1								1	
630	2								2	
640	1									1
(26") 650										
Number	422	67	99	129	68	11	12	8	23	5
Ave. Length	472 (18.6")	424 (16.7")	458 (18")	468 (18.4")	499 (19.7")	554 (21.8")	550 (21.7")	465 (18.3")	542 (21.3")	533 (21")
SD	46.4	23.3	23.7	30.1	34.4	30.2	31.5	55.5	65.3	65

Table 21. The 2013 age distribution of female walleye captured from the Fox River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length	Female	Age									
(in) mm	Total	3	4	5	6	7	8	9	10	11	12
(16") 400											
410											
420	1		1								
430											
440											
(18") 450											
460											
470											
480	1		1								
490											
(20") 500	3		2	1							
510	4		1	3							
520	1		1								
530	2		1	1							
540	2			2							
(22") 550	2			2							
560	3			2			1				
570	4			2	1	1					
580											
590	2							2			
(24") 600	4				2	1			1		
610	1				1						
620	2				1				1		
630	2					1				1	
640	3					2				1	
(26") 650	2							2			
660	3							1	2		
670	5						1		4		
680	5								5		
690	4							2	2		
(28") 700	3								1	1	1
710	1									1	
720											
730											
740	1								1		
(30") 750											
Number	61	0	7	13	5	5	2	7	17	4	1
Ave. Length	613 (24.1")	--	499 (19.6")	594 (23.4")	605 (23.8")	621 (24.4")	620 (24.4")	651 (25.6")	678 (26.7")	670 (26.4")	705 (28")
SD	71.4	0	36.4	24.4	18.7	30.5	77.8	41.6	30.2	46.5	0

Table 22. The length frequency of male and female walleye captured during electroshocking below Peshtigo dam, Peshtigo River, Marinette County, Wisconsin on April 17 and April 21, 2014.

Length (in)	mm	Male	Female
(14″)	350		
	360		
	370		
	380		
	390		
(16″)	400	2	
	410	4	
	420	3	
	430	7	
	440	17	
(18″)	450	17	
	460	5	3
	470	8	1
	480	8	1
	490	14	3
(20″)	500	16	4
	510	23	8
	520	22	10
	530	19	8
	540	26	7
(22″)	550	20	8
	560	17	7
	570	17	5
	580	12	4
	590	8	5
(24″)	600	9	3
	610	9	5
	620	3	7
	630	3	7
	640	2	7
(26″)	650	1	6
	660	1	2
	670	2	3
	680		3
	690		4
(28″)	700		7
	710		2
	720		1
	730		
	740		1
(30″)	750		1
	760		
	770		
Number		295	133
Ave. Length		527 (20.7″)	592 (23.3)
S.D.		55.9	69.9

Table 23. The 2014 age distribution of male walleye captured from the Peshtigo River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length (in) mm	Number	Age									
		2	3	4	5	6	7	8	9	10	11
390											
(16") 400	2			2							
410	4		3	1							
420	3		1	1	1						
430	7			7							
440	17			17							
(18") 450	17		7	10							
460	5			4	1						
470	8			3	2	3					
480	8			3	4		1				
490	14				7		4	3			
(20") 500	16				4	6	3	3			
510	23				14		5				4
520	22				4	5	9				4
530	19		3				13	3			
540	26					5	16				5
(22") 550	20						8			8	4
560	17				1		7			7	2
570	17						9		7	1	
580	12						5			2	5
590	8						3		2	3	
(24") 600	9						1	2	1	3	2
610	9								1	4	4
620	3									2	1
630	3								1		2
640	2								1	1	
(26") 650	1								1		
660	1									1	
670	2							1			1
680											
Number	295	0	14	48	38	19	84	12	14	32	34
Ave. Length	527 (20.7")		461 (18.1")	449 (17.7")	504 (19.8")	516 (20.3")	548 (21.6")	541 (21.3")	597 (23.5")	586 (23.1")	571 (22.5")
S.D.	55.9		43.3	17.6	22.4	24.0	26.6	57.9	28.9	30.2	42.1

Table 24. The 2014 age distribution of female walleye captured from the Peshtigo River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length		Age									
(in) mm	Number	3	4	5	6	7	8	9	10	11	12
440											
(18") 450											
460	3	1	2								
470	1		1								
480	1		1								
490	3		2	1							
(20") 500	4		3	1							
510	8		5	3							
520	10		8		2						
530	8		3	2	3						
540	7		4	3							
(22") 550	8			6	2						
560	7			3	3	1					
570	5			1	4						
580	4			1	2	1					
590	5					3	2				
(24") 600	3						2		1		
610	5					3	1		1		
620	7					3		2			2
630	7					5					2
640	7					4		1	1		1
(26") 650	6								2	4	
660	2					1				1	
670	3								2	1	
680	3									2	1
690	4									4	
(28") 700	7								3	3	1
710	2									2	
720	1									1	
730											
740	1									1	
(30") 750	1								1		
Number	133	1	29	21	16	21	5	3	11	19	7
Ave. Length	592 (23.3")	460 (18.1")	516 (20.3")	545 (21.5")	558 (22")	623 (24.5")	603 (23.8")	632 (24.9")	672 (26.5")	691 (27.2")	651 (25.6")
S.D.	69.9	--	22.5	23.8	20.9	24.2	8.4	11.5	43.8	25.9	31.5

Table 25. The length frequency of male and female walleye captured during electroshocking below Stiles dam, Oconto River, Oconto County, Wisconsin on April 10 and April 16, 2014.

Length (in)	mm	Male	Female
(14″)	350		
	360		
	370		
	380		
	390		
(16″)	400	3	
	410	9	
	420	17	
	430	23	
	440	24	
(18″)	450	36	1
	460	24	2
	470	21	
	480	24	12
	490	17	14
(20″)	500	16	13
	510	13	21
	520	8	17
	530	10	11
	540	8	9
(22″)	550	5	11
	560	3	9
	570	3	7
	580	3	7
	590	2	4
(24″)	600	1	7
	610		9
	620		3
	630		3
	640		6
(26″)	650		3
	660	1	2
	670		1
	680		
	690		3
(28″)	700		
	710		1
	720		
	730		1
	740		
(30″)	750		
	760		
	770		
Number		272	177
Ave. Length		477 (18.8″)	551 (21.7″)
S.D.		42.9	56.6

Table 26. The 2014 age distribution of male walleye captured from the Oconto River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length			Age								
(in)	mm	Number	2	3	4	5	6	7	8	9	10
	390										
(16")	400	3		3							
	410	9		7		2					
	420	17		17							
	430	23		8	13		2				
	440	24		5	14	5					
(18")	450	36		7	22	7					
	460	24			14	10					
	470	21		4	4	4		9			
	480	24			10	5	5	4			
	490	17			3	7	7				
(20")	500	16				6	6	4			
	510	13				3	7	3			
	520	8						6		2	
	530	10					6	2	2		
	540	8				3	2	3			
(22")	550	5					1	2	1		1
	560	3						3			
	570	3						1	1	1	
	580	3					1	1	1		
	590	2					1				1
(24")	600	1									1
	610										
	620										
	630										
	640										
(26")	650										
	660	1									1
	670										
Number		271	0	51	80	52	38	38	5	3	4
Ave. Length		477 (18.8")		434 (17.1")	458 (18")	479 (18.9")	511 (20.1")	516 (20.3")	557 (21.9")	542 (21.3")	605 (23.8")
S.D.		42.9		18.4	16.9	29.0	31.7	33.6	22.8	28.9	45.5

Table 27. The 2014 age distribution of female walleye captured from the Oconto River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length (in) mm	Number	Age								
		3	4	5	6	7	8	9	10	11
440										
(18") 450	1			1						
460	2		2							
470										
480	12		12							
490	14		14							
(20") 500	13	3	10							
510	21		14	7						
520	17		11	6						
530	11		7	2	2					
540	9		2	5		2				
(22") 550	11		2	4	4	1				
560	9			6	1	1	1			
570	7		1	1	4	1				
580	7				3	4				
590	4			1	2					1
(24") 600	7					5		2		
610	9					9				
620	3				1	1				1
630	3					2			1	
640	6					4			2	
(26") 650	3					2				1
660	2									2
670	1									1
680										
690	3								1	2
(28") 700										
710	1								1	
720										
730	1								1	
740										
Number	177	3	75	33	17	32	1	2	6	8
Ave. Length	551 (21.7")	505 (19.9")	510 (20")	539 (21.2")	572 (22.5")	608 (23.9")	565 (22.2")	605 (23.8")	678 (26.7")	659 (25.9")
S.D.	56.6	--	21.1	26.2	22.8	30.0	--	--	42.3	34.2

Table 28. The length frequency of male and female walleye captured during electroshocking below Menominee dam, Menominee River, Marinette County, Wisconsin on April 22 and April 23, 2014.

Length (in)	mm	Male	Female
(14″)	350		
	360		
	370		
	380		
	390		
(16″)	400	4	
	410	4	
	420	8	
	430	4	
	440	19	2
(18″)	450	21	2
	460	18	1
	470	18	3
	480	14	3
	490	17	7
(20″)	500	9	12
	510	12	13
	520	10	13
	530	19	7
	540	14	11
(22″)	550	19	12
	560	15	9
	570	10	5
	580	9	12
	590	5	15
(24″)	600	1	15
	610	1	14
	620	2	16
	630	2	11
	640	2	9
(26″)	650		11
	660	1	6
	670		8
	680		5
	690		4
(28″)	700		
	710		1
	720		
	730		5
	740		3
(30″)	750		
	760		
	770		1
Number		258	236
Ave. Length		507 (20″)	589 (23.2″)
S.D.		54.1	66.4

Table 29. The 2014 age distribution of male walleye captured from the Menominee River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length (in) mm	Number	Age													
		2	3	4	5	6	7	8	9	10	11	12	13	14	15
(16″) 400	4		1	3											
410	4		1	2	1										
420	8		5	3											
430	4			4											
440	19		6	10	3										
(18″) 450	21			21											
460	18			12	3	3									
470	18			3	12		3								
480	14			2	3	3	6								
490	17			7	7		3								
(20″) 500	9			2	2		3	2							
510	12						7	5							
520	10						6	2			2				
530	19					4	11				4				
540	14					6	6			2					
(22″) 550	19						15		4						
560	15						9	3	3						
570	10						6			2	2				
580	9						1		2	2	4				
590	5					1	3		1						
(24″) 600	1						1								
610	1								1						
620	2									1	1				
630	2										1				1
640	2										2				
(26″) 650															
660	1										1				
670															
Number	258	0	13	69	31	17	80	12	11	7	17	0	0	0	1
Ave. Length	507 (20″)		432 (17″)	457 (18″)	477 (18.8″)	521 (20.5″)	539 (21.2″)	528 (20.8″)	572 (22.5″)	576 (22.7″)	582 (22.9″)				635 (25″)
S.D.	54.1		13.8	23.1	19.5	37.9	31.5	23.4	20.1	27.3	46.7				--

Table 30. The 2014 age distribution of female walleye captured from the Menominee River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length			Age											
(in)	mm	Number	4	5	6	7	8	9	10	11	12	13	14	15
	440	2		1		1								
(18″)	450	2	1	1										
	460	1	1											
	470	3	3											
	480	3	3											
	490	7	7											
(20″)	500	12	12											
	510	13	13											
	520	13	8	5										
	530	7	2	3	2									
	540	11		8	3									
(22″)	550	12		3		6		3						
	560	9		6						3				
	570	5		1		3				1				
	580	12			7	3			2					
	590	15				12				3				
(24″)	600	15				15								
	610	14				8				3		3		
	620	16				10				3	3			
	630	11				4	3			4				
	640	9				7			1	1				
(26″)	650	11				3	2	2	2	2				
	660	6				1		2		3				
	670	8				2			4			2		
	680	5				1			3			1		
	690	4				1		1		1		1		
(28″)	700													
	710	1								1				
	720													
	730	5									1	1	2	1
	740	3								2			1	
(30″)	750													
	760													
	770	1												1
Number		236	50	28	12	77	5	8	12	27	4	8	3	2
Ave. Length		589 (23.2″)	506 (20″)	540 (21.3)	567 (22.3″)	611 (24.1″)	643 (25.3″)	625 (24.6″)	657 (25.9″)	636 (25″)	653 (25.7″)	664 (26.1″)	738 (29.1″)	755 (29.7″)
S.D.		66.4	17.5	24.3	22.9	35.9	10.9	59.3	33.9	48	55	44.5	5.8	28.3

Table 31. The length frequency of male and female walleye captured during electroshocking below DePere dam, Fox River, Brown County, Wisconsin on April 8 and April 9, 2014.

Length (in)	mm	Male	Female
(14")	350		
	360	1	
	370		
	380	2	
	390		
(16")	400		
	410	5	
	420	2	
	430	11	
	440	23	
(18")	450	17	2
	460	30	
	470	25	3
	480	19	7
	490	8	5
(20")	500	11	11
	510	6	14
	520	13	15
	530	8	28
	540	7	27
(22")	550	3	15
	560	2	11
	570	5	15
	580	1	7
	590	1	10
(24")	600		17
	610	1	13
	620		13
	630		12
	640		14
(26")	650		10
	660		14
	670		15
	680		8
	690		10
(28")	700		7
	710		7
	720		3
	730		1
	740		
(30")	750		
Number		201	315
		480	591
Ave. Length		(18.9")	(23.3")
S.D.		41.1	66.3

Table 32. The 2014 age distribution of male walleye captured from the Fox River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length	Male Number	Age									
		2	3	4	5	6	7	8	9	10	11
(in) mm	Year Class	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
(14") 350											
360	1	1									
370											
380	2			1		1					
390											
(16") 400											
410	5		3	1	1						
420	2			1	1						
430	11		3	8							
440	23		3	13	5	2					
(18") 450	17			11	6						
460	30			18	6	6					
470	25			11	7	7					
480	19			4	8	7					
490	8			2	2	2	2				
(20") 500	11			4	4		3				
510	6				2	2	2				
520	13				3	4	3				3
530	8				2	3	3				
540	7					2	2		3		
(22") 550	3						1	2			
560	2					1	1				
570	5				1		1		2	1	
580	1							1			
590	1									1	
(24") 600											
610	1							1			
620											
630											
640											
(26") 650											
Number	201	1	9	74	48	37	18	4	5	2	3
Ave. Length	480 (18.9")	365 (14.4")	432 (17")	460 (18.1")	480 (18.9")	491 (19.3")	528 (20.8")	578 (22.8")	557 (21.9")	585 (23")	525 (20.7")
S.D.	41.1	--	13.2	21.3	31.1	25.2	23.2	28.7	16.4	14.1	--

Table 33. The 2014 age distribution of female walleye captured from the Menominee River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length	Female Number	Age										
		2	3	4	5	6	7	8	9	10	11	12
(in) mm	Year Class	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
430												
440												
(18") 450	2		2									
460												
470	3			3								
480	7			7								
490	5			4	1							
(20") 500	11			6	5							
510	14			8	6							
520	15			7	4	4						
530	28			2	11	15						
540	27			4	9	14						
(22") 550	15				7	8						
560	11			1	6	3		1				
570	15				6	9						
580	7				4	3						
590	10				3	4		3				
(24") 600	17				1	4	1	4	4	1	1	1
610	13				1	2	3	3	1	1	1	1
620	13						5			3	5	
630	12							2	4	2	4	
640	14							7	2	5		
(26") 650	10							1		1	8	
660	14						2		4	4	2	2
670	15			2						5	6	2
680	8								5	3		
690	10									5	5	
(28") 700	7									3	3	
710	7							1	1		3	3
720	3									2	1	
730	1									1		
Number	314	0	2	44	64	66	11	22	21	36	39	9
Ave. Length	591 (23.3")		455 (17.9")	518 (20.4")	548 (21.6")	558 (22")	628 (24.7")	625 (24.6")	650 (25.6")	669 (26.3")	665 (26.2")	672 (26.5")
S.D.	66.3		--	40.8	27.9	25.1	19.5	29.7	32.8	32.6	32.2	40.9

Table 34. The length frequency of male and female walleye captured during electroshocking below Peshtigo dam, Peshtigo River, Marinette County, Wisconsin on April 2, 3 and 7, 2015.

Length (in)	mm	Male Number	Female Number
	390	2	
(16″)	400		
	410	4	
	420	4	
	430	7	
	440	9	
(18″)	450	12	
	460	26	
	470	20	1
	480	18	3
	490	20	2
(20″)	500	13	5
	510	13	4
	520	12	4
	530	10	4
	540	12	6
(22″)	550	10	3
	560	6	4
	570	3	4
	580	1	3
	590	2	5
(24″)	600	2	1
	610		
	620	1	
	630	1	1
	640	1	3
(26″)	650		1
	660		3
	670	1	1
	680		
	690		
(28″)	700		
	710		
	720		1
	730		
	740		
(30″)	750		1
Number		210	60
Ave. Length		497 (19.6″)	565 (22.4″)
S.D.		46.7	61.0

Table 35. The 2015 age distribution of male walleye captured from the Peshtigo River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length		Age									
		3	4	5	6	7	8	9	10	11	12
(in) mm	Number	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003
370	1	1									
380											
390	1	1									
(16”) 400	1	1									
410											
420	4	3		1							
430	5	4	1								
440	8	5		3							
(18”) 450	15	3	3	9							
460	22			18	4						
470	25		3	11	11						
480	23		5	6	12						
490	22		4	13	5						
(20”) 500	22			6	11		5				
510	25		6	6	7		6				
520	20				8	4	8				
530	25				10	10	5				
540	13			2		8	3				
(22”) 550	20				4	8	8				
560	17				6	9	2				
570	11					2	7	2			
580	8						2	3	2	1	
590	9					4	3		1	1	
(24”) 600	3						3				
610	4						1	2	1		
620	2						1		1		
630	1							1			
640	1										1
(26”) 650											
660											
670	1									1	
680											
690											
(28”) 700											
710											
720											
730	1									1	
Number	310	18	22	75	78	45	54	8	5	4	1
Ave. Length	515 (20.3”)	432 (17”)	487 (19.2”)	481 (18.9)	509 (20”)	553 (21.8”)	551 (21.7”)	596 (23.5”)	601 (23.7”)	648 (25.5”)	645 (25.4”)
S.D.	49.5	21.6	23.1	23.0	29.0	19.2	32.5	22.3	18.2	70.9	--

Table 36. The 2015 age distribution of female walleye captured from the Peshtigo River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length		Age									
		4	5	6	7	8	9	10	11	12	13
(in) mm	Number	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
440	1		1								
(18") 450											
460											
470	1	1									
480	1	1									
490	2		2								
(20") 500	4	2	1			1					
510	16	3	10	3							
520	11	2	2	7							
530	6		6								
540	11		9	2							
(22") 550	6		3	2	1						
560	7		3	2	2						
570	10		2	2	4			2			
580	6		4	1				1			
590	1						1				
(24") 600	6			3		2		1			
610	7					7					
620	4					2	1			1	
630	6					6					
640	5					3			2		
(26") 650	2							2			
660	11					9		2			
670	6					2		4			
680	9							2	2	3	2
690	4					2		1		1	
(28") 700	6							2	4		
710	0										
720	4								3	1	
730	0										
740	1									1	
Number	154	9	43	22	7	34	2	17	11	7	2
Ave. Length	595 (23.4")	507 (20")	540 (21.3")	550 (21.7")	569 (22.4")	634 (25")	610 (24")	656 (25.8")	696 (27.4")	692 (27.2")	685 (27")
S.D.	68.7	17.2	24.9	31.0	7.9	34.7	21.2	43.6	28.8	37.7	--

Table 37. The length frequency of male and female walleye captured during electroshocking below Stiles Dam, Oconto River, Oconto County, Wisconsin on April 9, 10, 13 and 14 2015.

Length (in)	mm	Male Number	Female Number
	390	2	
(16″)	400		
	410	4	
	420	4	
	430	7	
	440	9	
(18″)	450	12	
	460	26	
	470	20	1
	480	18	3
	490	20	2
(20″)	500	13	5
	510	13	4
	520	12	4
	530	10	4
	540	12	6
(22″)	550	10	3
	560	6	4
	570	3	4
	580	1	3
	590	2	5
(24″)	600	2	1
	610		
	620	1	
	630	1	1
	640	1	3
(26″)	650		1
	660		3
	670	1	1
	680		
	690		
(28″)	700		
	710		
	720		1
	730		
	740		
(30″)	750		1
Number		146	60
Ave. Length		497 (19.6″)	565 (22.2″)
S.D.		46.7	61.0

Table 38. The 2015 age distribution of male walleye captured from the Oconto. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length		Age									
(in) mm	Number	3	4	5	6	7	8	9	10	11	12
390	2	2									
(16″) 400											
410	4	2	2								
420	4	2	2								
430	7	3	1	3							
440	9	2	4	3							
(18″) 450	12		3	5	2	2					
460	26	5	5	16							
470	20		8	8	4						
480	18			7	10						1
490	20			8	8	4					
(20″) 500	13		2	2	9						
510	13			8		5					
520	12			10	2						
530	10				4	4	2				
540	12					7	5				
(22″) 550	10					4	2	4			
560	6					2	1	2	1		
570	3					1	1	1			
580	1						1				
590	2						2				
(24″) 600	2					1	1				
610											
620	1						1				
630	1					1					
640	1								1		
(26″) 650											
660											
670	1						1				
Number	210	16	27	70	39	31	17	7	2	0	1
Ave. Length	497 (19.6″)	437 (17.2″)	459 (18.1″)	484 (19.1″)	496 (19.5″)	535 (21.1″)	572 (22.5″)	560 (22″)	605 (23.8″)	--	485 (19.1″)
S.D.	46.7	24.3	23.2	26.6	19.8	37.3	37.7	7.9	56.6	--	--

Table 39. The 2015 age distribution of female walleye captured from the Oconto River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length (in) mm	Number	Age							
		3	4	5	6	7	8	9	10
(18″) 450									
460									
470	1			1					
480	3			2	1				
490	2			1	1				
(20″) 500	5		1	4					
510	4			2	1	1			
520	4		2	2					
530	4	1		3					
540	6			3	3				
(22″) 550	3			1	1	1			
560	4			3	1				
570	4			2	2				
580	3				1	2			
590	5				3	1	1		
(24″) 600	1							1	
610									
620									
630	1						1		
640	3					2		1	
(26″) 650	1						1		
660	3						2	1	
670	1					1			
680									
690									
(28″) 700									
710									
720	1								1
730									
740									
(30″) 750	1						1		
Number	60	1	3	24	14	8	6	3	1
Ave. Length	565 (22.2″)	535 (21.1″)	518 (20.3″)	528 (20.8″)	555 (21.9″)	600 (23.6″)	661 (26″)	638 (25.1)	720 (28.3″)
S.D.	61.0	--	11.4	29.7	36.2	52.6	52.8	30.6	--

Table 40. The length frequency of male and female walleye captured during electroshocking below Hattie Street Dam, Menominee River, Marinette County, Wisconsin on April 1 and 16, 2015.

Length (in)	mm	Male Number	Female Number
	340	1	
(14″)	350		
	360		
	370		
	380		
	390		
(16″)	400		
	410	4	
	420	6	
	430	4	
	440	7	
(18″)	450	9	
	460	19	
	470	24	1
	480	27	1
	490	28	2
(20″)	500	18	5
	510	18	4
	520	31	6
	530	25	8
	540	22	7
(22″)	550	19	10
	560	17	6
	570	16	8
	580	13	2
	590	8	3
(24″)	600	8	2
	610	3	3
	620	4	3
	630	1	7
	640	2	6
(26″)	650	1	2
	660	1	3
	670	1	3
	680	1	2
	690		
(28″)	700	1	
	710		
	720		
	730		1
Number		338	95
Ave. Length		521 (20.5″)	577 (22.7″)
S.D.		52.2	55.6

Table 41. The 2015 age distribution of male walleye captured from the Menominee River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length (in) mm	Number	Age										
		2	3	4	5	6	7	8	9	10	11	12
340	1	1										
(14”) 350												
360												
370												
380												
390												
(16”) 400												
410	4		3	1								
420	6		4		2							
430	4		1	1	1	1						
440	7		1	2	4							
(18”) 450	9		1	4	4							
460	19			8	11							
470	24			7	14		3					
480	27				16	11						
490	28				14	7	7					
(20”) 500	18				14			4				
510	18				9	5	4					
520	31					16	4	7		4		
530	25				4	7	7	7				
540	22					6	9	4		3		
(22”) 550	19					4	7		4	4		
560	17						5	8	4			
570	16					4	4	8				
580	13					2	4	7				
590	8						4	2	1			1
(24”) 600	8						2	3	1	1	1	
610	3							2		1		
620	4						1	1		1	1	
630	1								1			
640	2									1	1	
(26”) 650	1											1
660	1											1
670	1									1		
680	1											1
690												
(28”) 700	1										1	
Number	339	1	10	23	93	63	61	53	11	16	4	4
Ave. Length	521 (20.5”)	345 (13.6”)	428 (16.9”)	461 (18.1”)	486 (19.1”)	522 (20.6”)	545 (21.5”)	560 (22”)	574 (22.6”)	570 (22.4”)	644 (25.4”)	650 (25.6”)
S.D.	52.2	--	13.4	15.0	23.4	30.1	35.2	31.4	26.3	47.7	40.9	38.7

Table 42. The 2015 age distribution of female walleye captured from the Menominee River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length (in) mm	Number	Age									
		4	5	6	7	8	9	10	11	12	13
470	1	1									
480	1		1								
490	2	2									
(20”) 500	5		5								
510	4		3	1							
520	6	1	1	4							
530	8	1	6	1							
540	7		3	3	1						
(22”) 550	10	1	4	5							
560	6		3	2	1						
570	8		3	1	2	1	1				
580	2					2					
590	3			1	2						
(24”) 600	2					1	1				
610	3				1	2					
620	3					2	1				
630	7					4	1	1	1		
640	6					3	2		1		
(26”) 650	2							1		1	
660	3								1	2	
670	3					1		1	1		
680	2										2
690											
(28”) 700											
710											
720											
730	1									1	
Number	95	6	29	18	7	16	6	3	4	4	2
Ave. Length	577 (22.7”)	513 (20.2”)	537 (21.1”)	548 (21.6”)	581 (22.9”)	624 (24.6”)	622 (24.5”)	655 (26.8)”)	655 (25.8)	680 (26.8”)	685 (27”)
S.D.	55.6	29.9	25.1	20.5	23.0	26.3	27.3	20.0	18.3	37.0	--

Table 43. The length frequency of male and female walleye captured during electroshocking below DePere Dam, Fox River, Brown County, Wisconsin on March 31, April 1 and 2, 2015.

Length (in) mm	Number	Number
410	5	
420	6	
430	10	
440	14	
(18”) 450	12	
460	25	
470	27	1
480	23	1
490	23	2
(20”) 500	11	5
510	7	13
520	4	17
530	2	24
540	4	35
(22”) 550	2	32
560	1	34
570	1	34
580	1	24
590		20
(24”) 600		11
610	1	13
620		15
630		15
640		22
(26”) 650		11
660		14
670		8
680		10
690		8
(28”) 700		5
710		1
720		1
730		1
740		
(30”) 750		1
760		1
Number	179	379
Ave. Length	477 (18.8”)	589 (23.2”)
S.D.	33.3	53.9

Table 44. The 2015 age distribution of male walleye captured from the Fox River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length		Age							
(in) mm	Number	3	4	5	6	7	8	9	10
410	5	2	2	1					
420	6	1	3	1	1				
430	10	4	2	4					
440	14	4	5	2	2	1			
(18”) 450	12		7		5				
460	25		3	9	13				
470	27			10	14	3			
480	23		4		15	4			
490	23				10	13			
(20”) 500	11			3	5	3			
510	7			2	2	2			1
520	4				1	2	1		
530	2				2				
540	4					2	2		
(22”) 550	2				1	1			
560	1							1	
570	1					1			
580	1						1		
590									
(24”) 600									
610	1							1	
Number	179	11	26	32	71	32	4	2	1
Ave. Length	477 (18.8)	434 (17.1”)	450 (17.7”)	467 (18.4”)	482 (18.8”)	502 (19.8”)	550 (21.7”)	590 (23.2”)	515 (20.3”)
S.D.	33.3	11.4	20.6	24.9	21.9	25.7	25.2	35.4	--

Table 45. The 2015 age distribution of female walleye captured from the Fox River. Mean length at age was determined first by using an age length key to extrapolate length age distributions from the sub-sample of fish that were aged to the full sample length frequency, then second calculating the arithmetic mean of the length for a given age from the estimated full sample age distribution.

Length (mm)	Number	Age								
		4	5	6	7	8	9	10	11	12+
470	1	1								
480	1	1								
490	2			2						
(20") 500	5	1	3	1						
510	13		10		3					
520	17	3	11		3					
530	24		8	12	4					
540	35		7	21	7					
(22") 550	32		3	3	26					
560	34		7		27					
570	34		3	3	28					
580	24		2	18	2	2				
590	20			10	5		5			
(24") 600	11				4	3		4		
610	13				3	3	4		3	
620	15			3	3	3		6		
630	15				6	3	3		3	
640	22					13		9		
(26") 650	11					2	5	2		2
660	14					6		6	2	
670	8						2		6	
680	10							4	6	
690	8							3	3	2
(28") 700	5						1	1	1	2
710	1								1	
720	1									1
730	1								1	
740										
(30") 750	1									1
760	1									1
Number	379	6	54	73	121	35	20	35	26	9
Ave. Length	589 (23.1")	502 (19.8")	538 (21.2")	563 (22.2")	570 (22.4")	637 (25.1")	634 (25")	652 (25.7")	672 (26.4")	706 (27.8")
S.D.	53.9	17.5	21.9	28.9	25.9	22.1	32.2	28.4	30.7	38.2

Table 46. The recapture of tagged walleye in 2015 during DNR surveys by year and river. The number indicates the number recaptured in that location. All recaptures were made utilizing the boom shocker boat.

River Tagged	Year Tagged	Recapture River in 2015			
		Oconto River	Peshtigo River	Menominee River	Fox River
Oconto River	2012	1			
	2013	3	1		
	2014				
	2015				
Peshtigo River	2012		4		
	2013		2		
	2014		1		
	2015				
Menominee River	2013		1	3	
	2014				
	2015				
Fox River	2013				
	2014				4
	2015				